



## PRODUCT CATALOGUE 2020/2021

**RATEC**  
MEET THE BETTER IDEAS





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RATEC, innovative by tradition

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For a customised supply of concrete

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We are always here for you

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# RATEC has revolutionised the world of precast concrete elements

*Innovation and tradition are at the core of what we do.  
We set standards – then and now.*

RATEC is one of the leading suppliers and service providers in the precast concrete industry. We set global standards in terms of developing and producing magnetic shuttering technology and complex shuttering solutions.

Originating from the rationalisation philosophy of Reymann Technik GmbH, RATEC has made a name for itself since its foundation in 1994 through innovation and quality.

We were a pioneer in using shuttering magnets in precast concrete plants. We were also first to integrate switchable magnets directly into the shuttering – back in the days this was a small revolution in the precast concrete industry. Today, magnet-based shuttering solutions are standard worldwide in many precast concrete productions.

With our know-how of 25 years of intensive development work in close cooperation with our customers worldwide, RATEC has the right answer to every conceivable shuttering situation. Our solutions are not only technically well-engineered, but they also take into account economic feasibility, efficiency and process optimisation.

With more than 80 employees, two wholly-owned production sites - in Germany and the USA, additional sites Spain and Singapore and a worldwide distribution network, RATEC is present on all continents.

**Our motto "MEET THE BETTER IDEAS!" is part of our daily corporate culture and, in combination with innovation and extensive know-how, it yields innovative and economical solutions at the highest quality level.**

# MEET



# THE BETTER



# Engineering and the highest level of vertical integration are the basis for innovative solutions

*Thanks to our focus on providing streamlined shuttering technology solutions for precast concrete plants, RATEC's components and shuttering systems are the world leaders in the industry.*

With our wealth of experience through the integration into the Reymann Group, new developments in the precast concrete industry can be incorporated into the further development of our shuttering components often even before they are implemented into production processes.

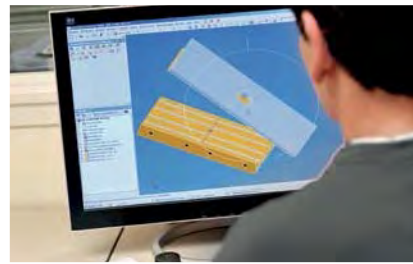
**Due to full in-house production, individual requirements can be accommodated any time.**

The inventiveness, reliability and speed of all employees and the short decision making processes in cooperation with our customers are key components for continuous development.

Another important aspect of our productivity is our in-house magnet production, which supplies all the components required for RATEC shuttering solutions and thus combines absolute transparency with reliability and quality "Made in Germany".



All shuttering formwork is developed and produced centrally in Hockenheim, from where it is shipped to customers in more than 70 countries worldwide.



In-house production ensures high quality and flexibility.



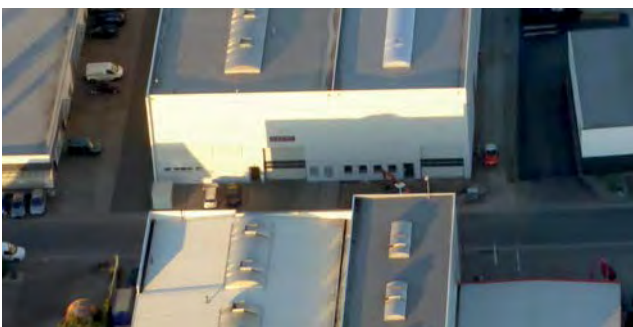
## Production area of approx. 4,000 m<sup>2</sup> in Hockenheim

With the expansion of the production halls in Hockenheim, more than 4000m<sup>2</sup> of production space is now available. This provides additional space, which is required particularly for the construction of components for upcrete® – such as battery moulds, room module moulds and pumping stations. Another production site is located in the USA, where the products for the US market are manufactured. All other RATEC shuttering formworks and components are produced exclusively in Hockenheim, from where they are shipped worldwide.

## New laser offers even more precision

Precision shuttering requires precision tools during production. In order to produce even faster and more efficiently, we have continually made ground-breaking investments in the machine park. For example, one of the first solid-state lasers with a laser output of 8 kW of the latest Trumpf generation has been in use since September 2015.

This allows the sheets to be processed even faster and offers highly precise cutting.





# On site for you in person

## Our foreign subsidiaries



### SUBSIDIARY USA

RATEC has been operating its own subsidiary in the USA for over 20 years. The offices and production of RATEC LLC is located in Clearwater, Florida. This is where all products are specially designed for the North American market, including tilting tables, prestressing beds for prestressed concrete elements and special shuttering solutions for embankment walls, beams, supports and stairs. This not only ensures proximity to the customer and speed, but also the combination of the high quality standards of "German engineering" with a proud "Made in the USA" in production.



### SUBSIDIARY SINGAPORE

RATEC Asia Pte. Ltd. has been operating in Singapore since 2017. Established as a joint venture with a local planning and construction company, this subsidiary further improves customer contact in the Asian market. Its success is based on a dedicated team of employees with many years of experience in the construction and precast industry in Asia. This guarantees application- and cost-optimised solutions, while taking into account region-specific requirements and a strong understanding of the needs of our local customers.



### SUBSIDIARY SPAIN

Barcelona is home to our customer service for Spain and Latin America. Juergen Deppe manages the office of RATEC S.L.U. in the heart of the Spanish metropolis. For more than 10 years, RATEC S.L.U. has acted as an interface between the headquarters in Germany and the Spanish-speaking regions of the world.

Our sales partners are at your service worldwide.  
Please find all contact information on page 158.

# The upcrete® technology turns complex moulds into an economic reality



Modular housing, Peru



Modular housing, Philippines



Facade elements, Expo Pavillon, Italy



Facade elements, Indonesia



Mast elements for wind farm, China



Noise barriers, USA

- Our battery and 3D module shuttering are available in upcrete® compatible design on request!



*With upcrete®, nearly every conceivable precast geometry can be produced in a single step.*

upcrete® – A technology jointly developed by RATEC and Reymann Technik refers to the process for concreting the most complex precast element geometries using the process of filling a mould with concrete from bottom to top under pressure in a mounting stream, which combines all-round exposed concrete surfaces and production in the final installation position with the highest possible economic efficiency.

In this process, self-compacting concrete is pumped from below into a partially closed mould. The system's flexibility presents unique opportunities for shaping, element geometry and the production process, while ensuring top quality and smooth surfaces on all sides.

The elements are filled via a pump from below (injection). Very little air is introduced into the concrete by the filling process. When using self-compacting concrete, no additional mechanical compaction is required. Almost all bounding surfaces can be encased. Air outlets are provided only at certain points of the encased geometry, similar to injection moulding of plastics and metals.

## UPCRETE® PROCESS – BENEFITS FOR EVERYONE

- Fewer restrictions regarding feasibility
- Maximum dimensional accuracy on the component
- Complete filling of the most difficult geometries
- Production of complex concrete bodies in final installation position
- All-around smooth surfaces
- No peeling and smoothing of surfaces
- Minimal concrete residue
- Maximum performance
- Quiet, material-friendly, efficient and employee-friendly concrete element production
- High utilisation of the mould
- Easy integration into existing production possible via concrete pump suitable for local concrete logistics (mixer, concrete truck, bucket conveyor).



# More than just a supplier – RATEC takes responsibility

*Together with the customer, RATEC evaluates which type of production is most suitable for a precast concrete element in a given quantity and quality.*

RATEC not only provides suitable shuttering solutions, but, if needed, also develops the appropriate production concept based on the customer's requirements.

Particularly for our vertical and 3D module shuttering, we can support you in planning and implementing well-thought-out production processes and ensure that your production becomes operational efficiently and logistically optimised.

When integrating into existing production, we also develop a proposal on how you can optimally integrate our shuttering components or concrete pumps into your production processes.

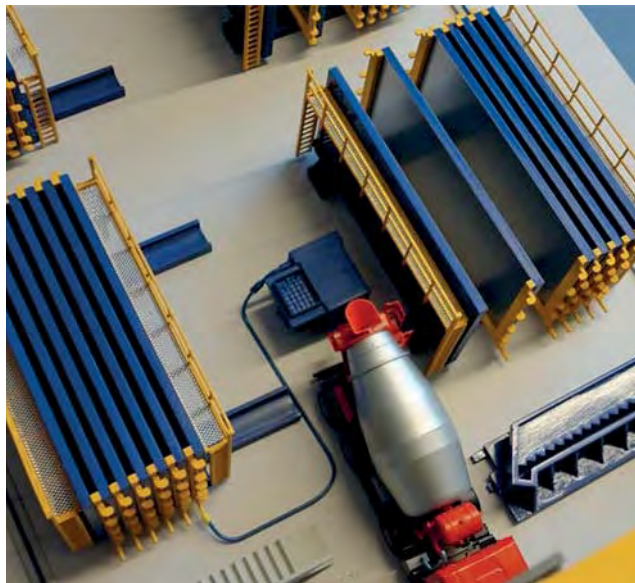
**RATEC solutions are always created in close cooperation and good faith with our customers.**

**We want you to succeed! This is why we take your needs seriously. A team of experienced precast concrete specialists, application technicians, plant designers and engineers is available to provide comprehensive advice.**

Our close contact with customers and understanding of their needs results in better ideas.



Factory model of a battery manufacture



Battery manufacturing, Indonesia



Modular housing production plant, Peru



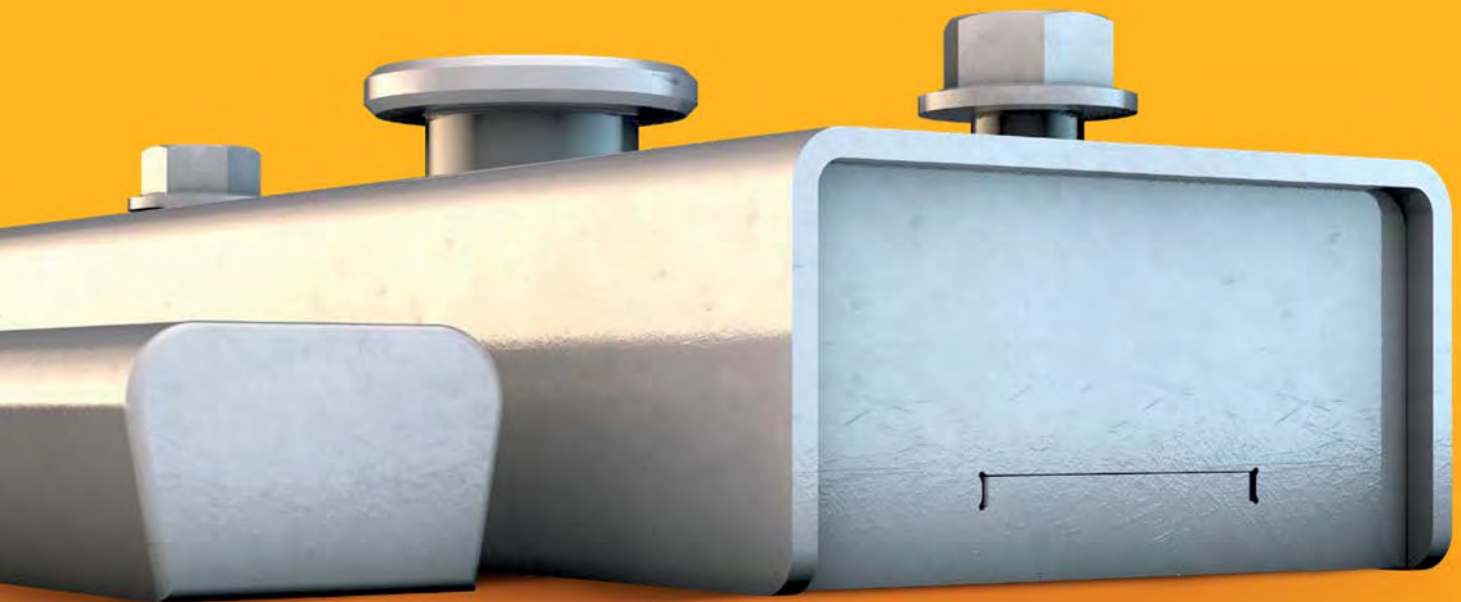
# 02

## SHUTTERING MAGNETS

*Basis for efficient shuttering technology*

Having our own magnet production "Made in Germany" and complete in-house production at our location in Hockenheim, Germany, we are able to tailor our magnet components exactly to your needs. Or you can rely on our proven and practical standard solutions, which are described on the next pages.

Benefit from experience and flexibility – **MEET THE BETTER IDEAS!**



**SPB STANDARD PRO MAGNETIC BOX**

SWITCHABLE MAGNETS

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**EURO RTM STANDARD MAGNETS**

NON-SWITCHABLE MAGNETS

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**STANDARD MAGNETS**

N A, P AND PDA SERIES

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**BLOCK MAGNETS**

MLU SERIES

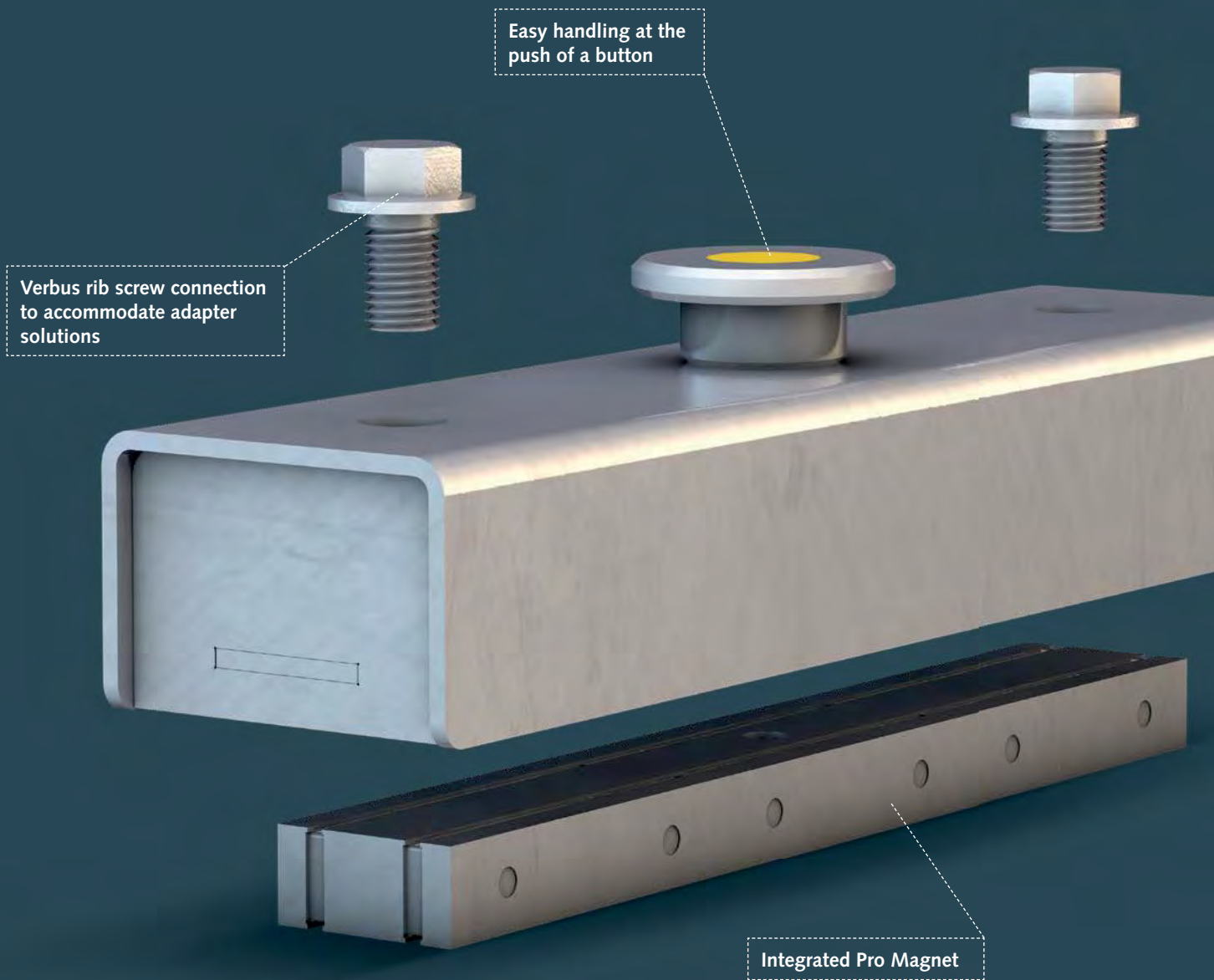
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# SPB Standard Pro Magnetic Box

## Unlimited possibilities at the touch of a button

With the SPB Standard Pro magnetic box, we have set the standard for switchable shuttering magnets in the concreting plant. The SPB is the original and offers absolute reliability and durability with its integrated Pro Magnet, even in difficult conditions. The magnetic retaining core is tested regularly in our own magnet production to meet the specified retaining force. The SPB is ready to accommodate adapters and various shuttering skin carriers, which offer countless usage possibilities and thus maximum flexibility for the future.



- Custom-made products are possible.
- Simply ask us about it.



## FIELDS OF APPLICATION

The Verbus rib screw connection offers countless possibilities for attaching shuttering skin carriers of all types and for integrating systems such as, e.g. Doka, Peri, H-beam carriers or RATEC shuttering systems.

## PROPERTIES

- Integrated Pro Magnet – "Made in Germany"
- RATEC original automatic magnet system for optimum hold even under heavy loads
- Highest retaining force with minimum dead weight
- Sturdy, canted housing construction
- Fully enclosed design
- Proven longer life of the integrated magnet components

## THE MAGNET IN THE BOX

### Pro Magnet – the basis of all our ideas

Our standard magnets of the Pro Magnet series are used in all RATEC magnet components and shuttering systems.

Our in-house magnet production allows us to tailor the magnets to the exacting requirements of our customers and thus realise numerous special solutions. In addition to the tried-and-tested standard variants with a retaining force of 450, 900, 1350, 1800 or 2100 kg, we can also implement other designs and magnet strengths as required, or adapt the installation components structurally without losing retaining force.

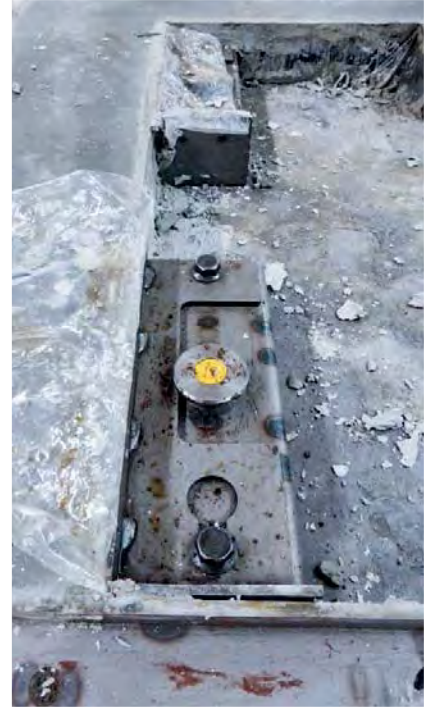
High-performance neodymium magnets are used for the Pro Magnet series, which are built into our standard integrated magnets at our own production facilities using a patented design. Stainless steel bandages as well as various coating steps and processes make the magnetic core extremely resistant to corrosion. Our extensive know-how in the field of magnet design and application enables us to perfectly meet every customer-specific requirement.



# Application examples



SPB with Doka plywood beam



SPB with 2-sided angle adapter



SPB for fixing staircase moulds



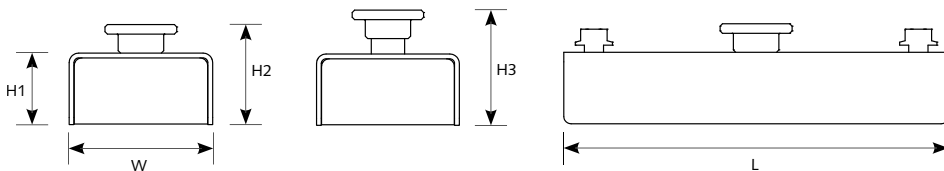
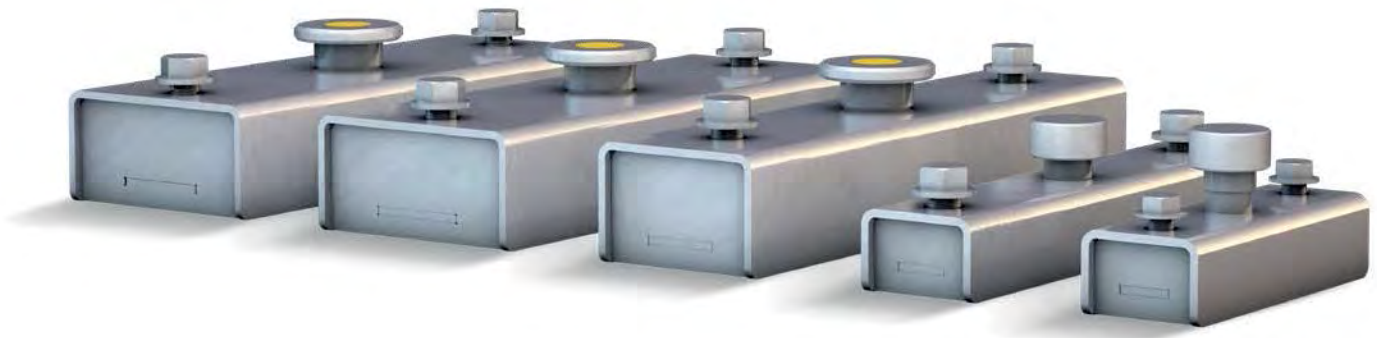
SPB with HT stop adapter and Easy Form (from page 34)



SPB as the basis of the PSV shuttering system (Page 52)

## ➤ SPB Standard Pro magnetic box

The SPB is the basis for all applications in shuttering construction. The SPB consists of a heavily canted U-profile with an integrated automatic magnet system with a retaining force of 450–2100kg and screw connections for accommodating adapters.



	SPB 450	SPB 900	SPB 1350	SPB 1800	SPB 2100
<b>Article no.</b>	<b>05477</b>	<b>03255</b>	<b>04200</b>	<b>07949</b>	<b>03232</b>
L (mm)	170	280	360	320	320
W (mm)	60	60	90	120	120
H1 casing (mm)	40	40	60	60	60
H2 switched (mm)	69	69	84	84	84
H3 released (mm)	79	79	94	94	94
Retaining force (kg)	450	900	1350	1800	2100

The SPB forms the basis of our intelligent shuttering systems Easy Form (from page 34), MST universal plywood beam (from page 44) and PSV Pro System Vario (from page 52).

# Accessories

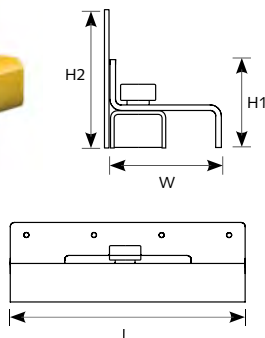
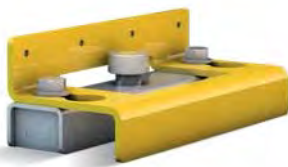
## ➤ Lifting tool



Article no.	03299	03292
For	SPB 450 SPB 900	SPB 1350 SPB 1800 SPB 2100

## ➤ Angle adapter H = 95 mm

Longitudinal side for fixing of plywood.



Article no.	07514	04299
For	SPB 450	SPB 900
L (mm)	250	278
W (mm)	120	120
H1 base height (mm)	95	95
H2 shuttering skin (mm)	95–200	95–200

Other heights are available upon request. The shuttering skin can protrude up to 100mm at the top.

## ➤ HT stop adapter

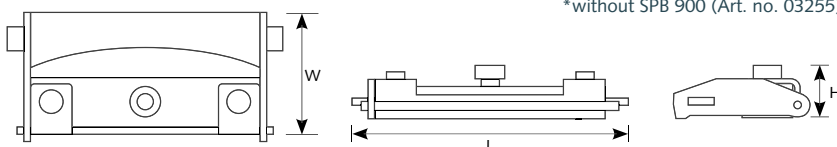
**NEW**

The positioning aid is now available as an adapter solution for the SPB 900. The adapter remains in place after the demoulding process. If the same geometry is used for the next element, the old shuttering pattern is restored. This is made possible by a hinged stop bar, which is folded away from the shuttering by approx. 80mm during stripping. The adapter solution gives you the flexibility to use your shuttering components efficiently.



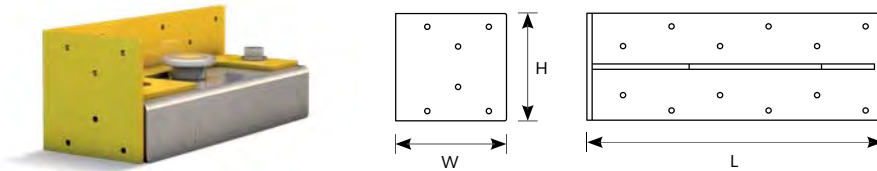
Article no.	68532
L (mm)	340
W (mm)	160
H (mm)	46

\*without SPB 900 (Art. no. 03255)



## ➤ 2-sided attachment combo angle

For longitudinal or frontal fixing of plywood, suitable for SPB 1800 and 2100.

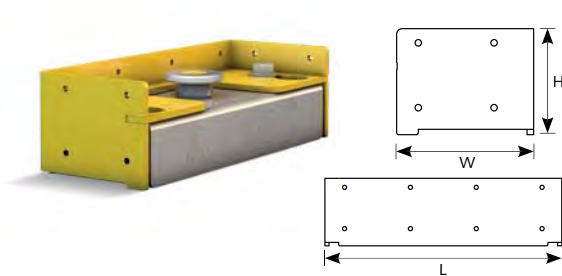


Article no.	21668	54193	20457	69046	40409
For	SPB 1800, SPB 2100				
L (mm)	336	336	336	336	336
W (mm)	126	126	126	126	126
H adapter (mm)	98	148	198	248	298
For plywood (mm)	100 – 200	150 – 250	200 – 300	250 – 350	300 – 400

Other heights are available upon request. The shuttering skin can protrude up to 100mm at the top.

## ➤ 3-sided attachment combo angle

For longitudinal or frontal fixing of plywood, suitable for SPB 1800 and 2100.

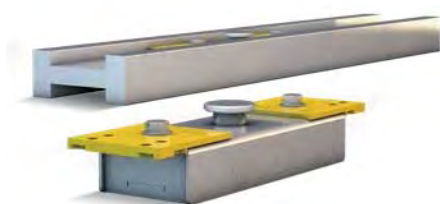


Article no.	46441	69531	46446	69532	40336
For	SPB 1800, SPB 2100				
L (mm)	342				
W (mm)	126				
H adapter (mm)	98	148	198	248	298

Other heights are available upon request. The shuttering skin can protrude up to 100mm at the top.

## ➤ Adapter for H-beam

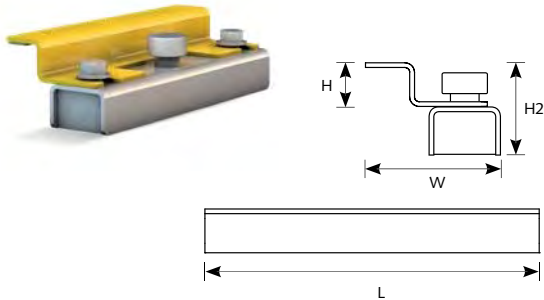
For magnetic fixation of an H-beam, e.g. Doka, Peri etc.



Article no.	46878	46870
For	Doka H20 N, Peri VT20, etc.	

## ➤ Suppressing device

For secure fixing of, e.g. U-profiles, window frames etc.

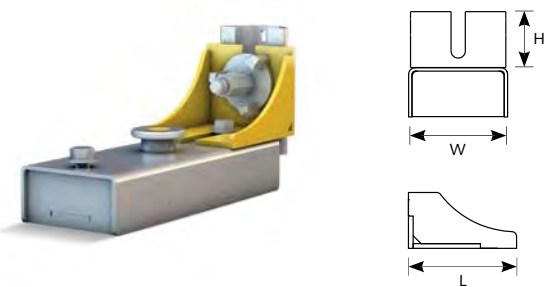


Article no.	09057
For	SPB 900
L (mm)	278
W (mm)	105
H1 adapter (mm)	73
H2 adapter and magnet (mm)	100

Other heights are available upon request.

## ➤ Attachment face angle Dywidag for radius shuttering e.g. for balconies

Angle adapter with Dywidag quick release and fastening plate for mounting on a steel or spring steel sheet.

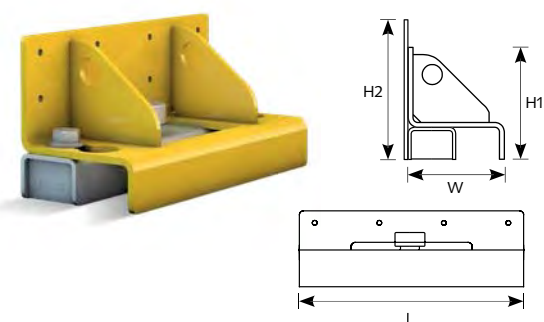


Article no.	08264	10162
For	SPB 1350, SPB 1800, SPB 2100	
L (mm)	120	136
W (mm)	136	60
H shuttering skin (mm)	160–220	140–160

Other heights are available upon request.

## ➤ Angle adapter H = 140 mm

For shuttering skin from 140 mm to 240 mm in height.



Article no.	06278
For	SPB 900
L (mm)	278
W (mm)	120
H1 base height (mm)	140
H2 shuttering skin (mm)	140–240

Other heights are available upon request. The shuttering skin can protrude up to 100 mm at the top.

## ➤ Wood tensioner with clamping adapter suitable for all SPB variants

For safe holding down of shuttering profiles of all types.



	Hold-down rod	Wood tensioner
Article no.	04399	04400
For	SPB 1350 SPB 1800 SPB 2100	All
L (mm)	365	180

Other heights are available upon request.

## How many magnets do I need for my shuttering?

The number of magnets given below is calculated for 8 mm steel pallets and a concrete density of 2.4 t/m<sup>3</sup>. Please contact us if other dimensions are required, we are happy to help.

The numbers indicated are a non-binding recommendation!

Height 100–150 mm				
Length (mm)	SPB 2100	SPB 1800	SPB 1350	SPB 900
1000	2	2	3	3
1500	2	2	3	3
2000	2	2	3	3
2500	2	2	3	3
3000	2	2	3	3
3500	3	3	4	5
4000	3	4	5	5

Height 150–200 mm				
Length (mm)	SPB 2100	SPB 1800	SPB 1350	SPB 900
1000	2	2	2	3
1500	2	2	3	4
2000	2	2	3	4
2500	2	2	3	4
3000	2	3	4	4
3500	3	3	4	5
4000	3	4	5	6

Height 200–250 mm				
Length (mm)	SPB 2100	SPB 1800	SPB 1350	SPB 900
1000	2	2	3	3
1500	2	2	3	3
2000	2	2	3	4
2500	2	2	3	4
3000	2	3	4	5
3500	3	3	4	6
4000	3	4	5	6

Height 250–300 mm				
Length (mm)	SPB 2100	SPB 1800	SPB 1350	SPB 900
1000	2	2	3	3
1500	2	2	3	3
2000	2	2	3	4
2500	3	3	4	5
3000	3	3	4	6
3500	3	4	5	7
4000	4	4	6	8

Height 300–350 mm				
Length (mm)	SPB 2100	SPB 1800	SPB 1350	SPB 900
1000	2	2	3	3
1500	2	2	3	4
2000	3	3	4	5
2500	3	3	4	6
3000	4	4	5	7
3500	4	4	6	8
4000	5	5	6	9

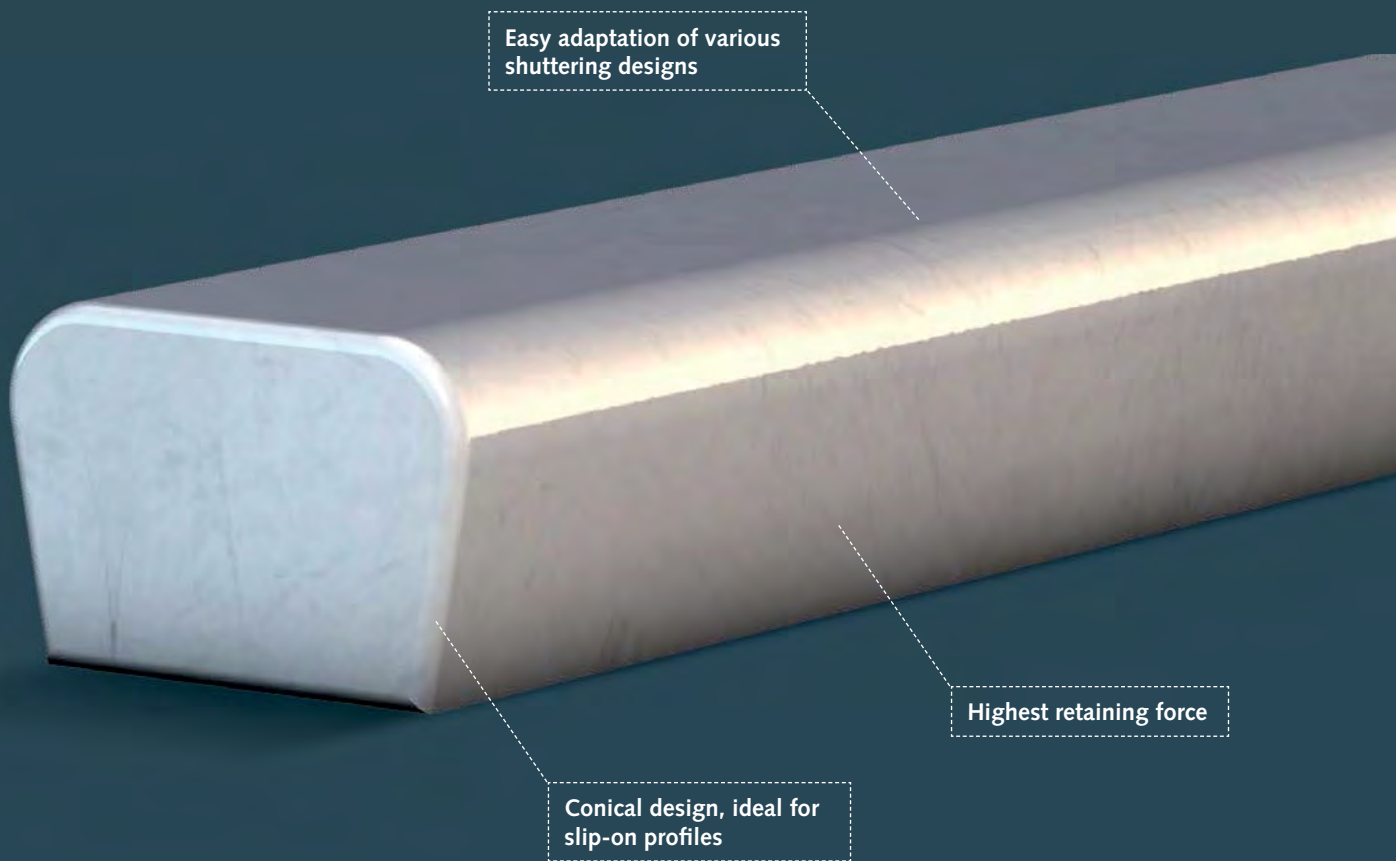
Height 350–400 mm				
Length (mm)	SPB 2100	SPB 1800	SPB 1350	SPB 900
1000	2	2	3	4
1500	2	3	4	5
2000	3	3	4	6
2500	3	4	5	7
3000	4	4	6	8
3500	5	5	7	9
4000	5	6	7	11

# EURO RTM

## The compact basic solution

The EURO RTM standard magnets were the first magnet components to introduce magnetic shuttering solutions to modern precast concrete production. With their compact design and reliable retaining force, they are still suitable for many shuttering tasks and are used today in numerous plants.

The special shape allows various accessory components to be slipped over and safely fixed in place through positive locking.



- Custom-made products are possible.
- Simply ask us about it.



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## FIELDS OF APPLICATION

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For secure attachment of multifunctional slip-on shuttering or the RATEC universal adapter set, as well as for installation into existing plywood shuttering.

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## PROPERTIES

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- Compact design
- High retaining force with minimum dead weight
- Smooth surfaces on all sides for easy cleaning
- Conical bevel for original-pressure-point effect when fastening U profiles
- Insulated on all sides, only bearing surface is magnetic

# Application examples



Combination with universal adapter H page 28



EURO RTM with universal adapter H (page 28)



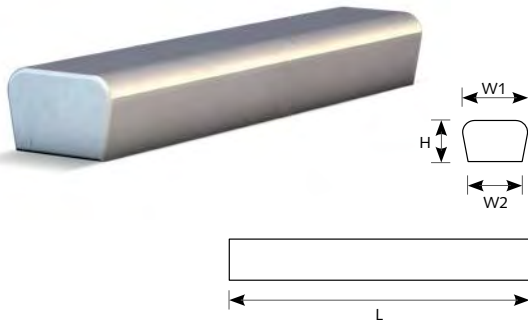
Use with slip-on profile for corners



Combination with universal adapter GF (page 28)

## ➤ EURO RTM – the all-rounder

The foundation for attaching RATEC U profiles and the RATEC universal adapter (from page 28).

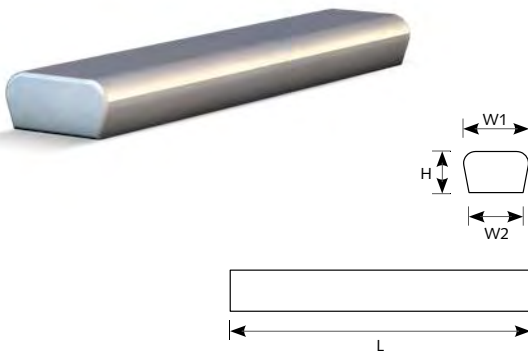


	EURO RTM 250-900	Aluminium EURO RTM 250-900*	EURO RTM 125-350
<b>Article no.</b>	<b>00202</b>	<b>25513</b>	<b>00379</b>
L (mm)	250	250	125
W1 (mm)	54-0.2	54-0.2	54-0.2
W2 (mm)	45-0.2	45-0.2	45-0.2
H (mm)	35-0.2	35-0.2	35-0.2
Weight (kg)	2.2	2.2	1.2
Retaining force (kg)	900	900	350

\*With integrated Pro Magnet 900.

## ➤ EURO RTM – the flat one

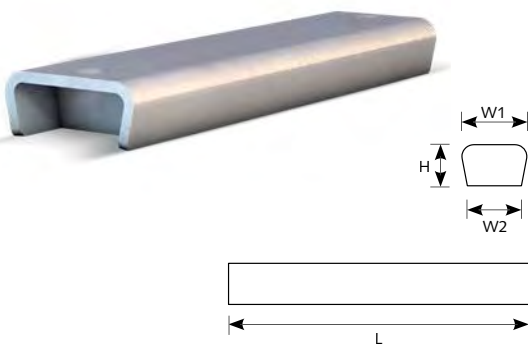
With its extremely flat design featuring only 25 mm in height, this unit is particularly suitable for the construction of a low U profile and for special solutions with pre-stressed elements.



	EURO RTM 250-900 / 25-54	EURO RTM 125-400 / 25-54
<b>Article no.</b>	<b>00507</b>	<b>00509</b>
L (mm)	250	125
W1 (mm)	54-0.2	54-0.2
W2 (mm)	45-0.2	45-0.2
H (mm)	25-0.2	25-0.2
Weight (kg)	2.1	1.2
Retaining force (kg)	900	400

## ➤ EURO RTM – the couplable one

The 2nd generation of EURO RTM standard magnets with higher retaining force. The replaceable threaded pieces enable the fixing of various attachments and shuttering elements. Depending on the application, it is available in a wide or narrow design.



	EURO RTM 320-1800 2G	EURO RTM 300-900 2G
<b>Article no.</b>	<b>00474</b>	<b>00530</b>
L (mm)	320	300
W1 (mm)	84-0.2	54-0.2
W2 (mm)	75-0.2	44-0.2
H (mm)	35-0.2	35-0.2
Weight (kg)	4.6	2.5
Retaining force (kg)	1800	900

# Accessories

## ↗ Lifting tool



Article no.	00204	05116
For	All EURO RTM, except Art. no. 00474	EURO RTM Art. no. 00474 "the flat one"

## ↗ Universal adapter H

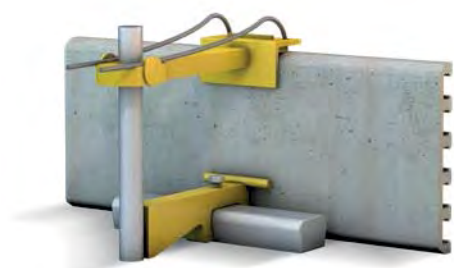
Universal adapter, as a set incl. EURO RTM 250–900 or individually for fast stepless, right-angled fastening of plywood shuttering.



Article no. as set	10696	02724	10805	25874
Article no. without EURO RTM	25965	03516	25966	25967
H (mm)	240	300	350	400

## ↗ Universal adapter GF

Universal adapter incl. EURO RTM 250–900 or single, with clamps for stepless, right-angled fastening of shuttering and fibre concrete upstands of all kinds.



Article no. as set	10714	25858	10713	25869
Article no. without EURO RTM	25959	11497	25963	25964
H (mm)	240	300	350	400

**➤ RATEC U-shuttering slip-on profile**

RATEC U profiles works based on the original pressure-point effect, in which the pressure points on the inside of the shuttering grip the conical slope of the EURO RTM magnets. This makes all RATEC U profiles shake-proof and vibration-proof.



Article no.	On request
L (mm)	On request
W (mm)	60
H (mm)	60 – 100

Different chamfering is possible. Draft angles can be realised as required.  
Magazine recesses and receptacles for all common robot systems are possible.

**➤ Corner slip-on profile**



Article no.	On request
L (mm)	300x300
W (mm)	60
H (mm)	60 – 100

Different chamfering is possible.

# Standard magnets

## Tailor-made retaining force

*Thanks to the high retaining force, the standard magnet series is perfectly suitable for stabilising shuttering formworks of all types.*

All series are available with or without handlebar grip and with or without additional holes to accommodate angles.

The usage possibilities of the standard magnets can be extended individually through accessories such as longitudinal or frontal suppressing or clamping adapters.

### PROPERTIES

- Magnetic rubber (A series) or neodymium magnets (P and PDA series)
- Temperature exposure up to 60 °C, P and PDA series on request up to 80 °C
- Eccentric removable
- Smooth surfaces, easy to clean

#### ➤ Standard magnets series A

- Retaining force 600–2000 kg\*



#### ➤ Standard magnets series P

- Retaining force 1200–3000 kg\*



#### ➤ Standard magnets series PDA

- Retaining force 1200–3000 kg\*



Please contact us for additional product information and a tailor-made offer.

\*Retaining forces measured on a 10mm steel plate, polished.

# Block magnets for fixing

## Pin-point accuracy

*The magnetic strips of the MLU series are particularly suitable for installation in U-shaped longitudinal and transversal shuttering in the production of girder slabs.*

### PROPERTIES

- Magnetic rubber or neodymium magnets
- Temperature exposure up to 60°C, on request up to 80°C
- Can be delivered with or without chamfer
- Partially available with and without groove
- The adhesion side is polished
- The open design is also available with aluminium caps screwed to the front
- The magnet is released with a separate lifting tool

#### ➤ Magnetic strips MLU-0300K

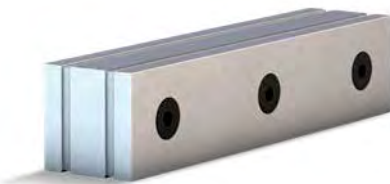
Fig. example



- With chamfer on top
- Retaining force 300–550 kg
- Open design

#### ➤ Magnetic strips MLU-1000

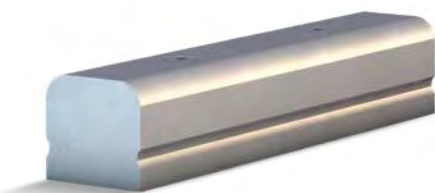
Fig. example



- Without chamfer
- Retaining force 750–1200 kg
- Open design

#### ➤ Magnetic strips MLU-1400WN

Fig. example



- One-piece with groove
- Retaining force 900–1400 kg
- Closed design

# 03

## MAGNETIC SHUTTERING SYSTEMS FOR EFFICIENT PRODUCTION

*Our complete programme for all shuttering tasks*

RATEC magnetic shuttering systems have set the standard for streamlined production in precast concrete plants. Whether for stationary production or automated circulation systems – we have the right detailed solution for your individual needs. Our standard solutions cover most issues encountered in plants, and our experience from hundreds of projects worldwide allows us to suggest or develop the suitable solution for you.





## SYSTEM SUITABILITY FOR:



Massive and sandwich elements



Girder slabs and double walls



Stairs elements



Recesses



TT ceiling elements



Beam parts, supports, binders

### EASY FORM



Page **34**

### MST



Page **44**

### PSV + PSV<sup>2</sup>



Page **52**

### MHS



Page **60**

### SAS



Page **66**

### SAS-MF



Page **76**

### RT U60 PRO



Page **82**

### TT PRO



Page **90**

### RECESS SOLUTIONS

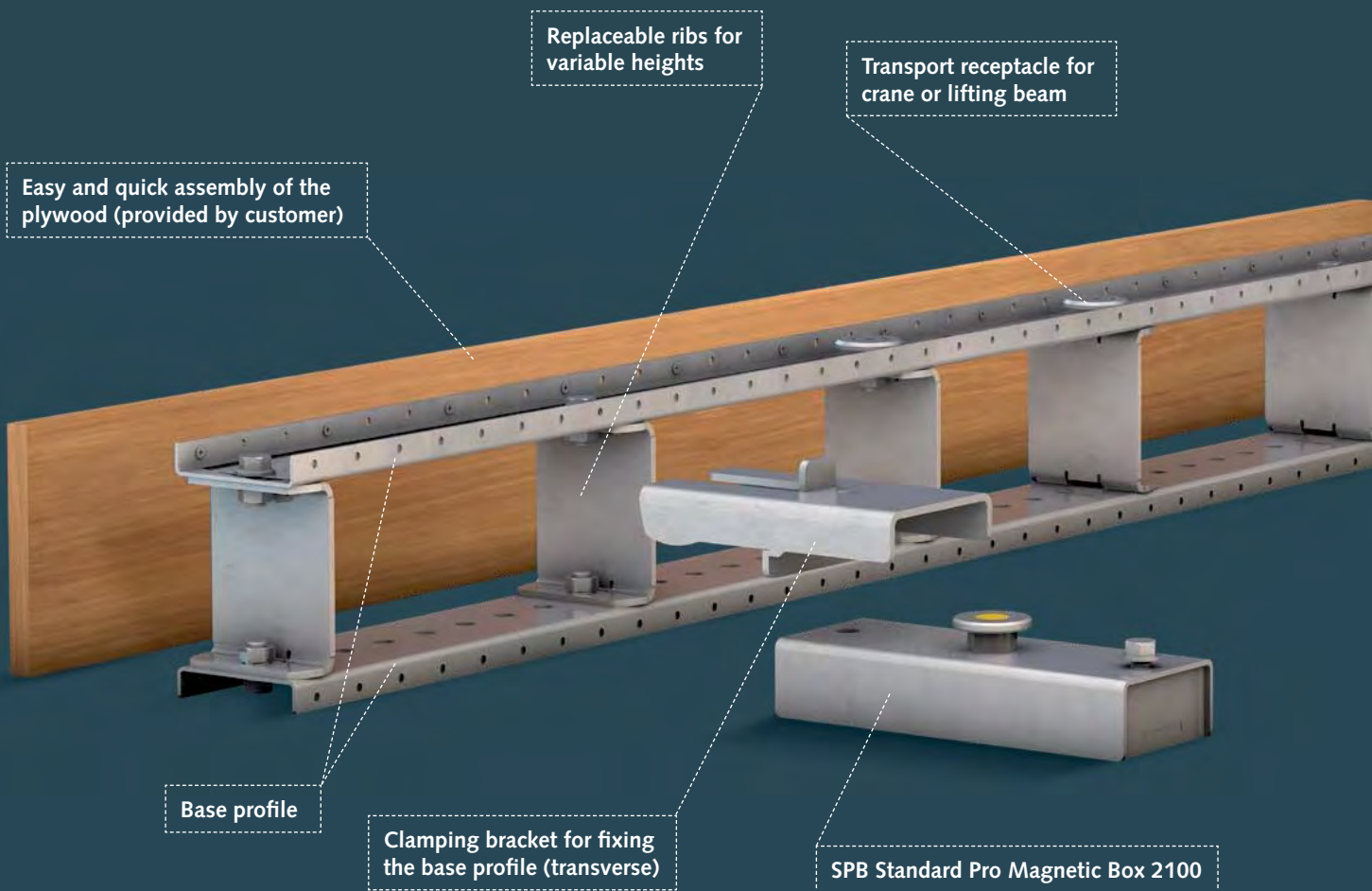


Page **96**

# Easy Form

## From simple to complicated – always the right answer with Easy Form

Practical and flexible – with the new "Easy Form" shuttering system, even the most difficult shuttering situations can be dealt with quickly and easily. Different ribs allow the shuttering height to be adapted seamlessly. With the flat base, protruding reinforcements from a height of 25 mm are possible. Easy Form is designed as a modular system, which can be easily expanded, supplemented and flexibly used even with just a few components. In combination with the vast range of accessories, this system always has the right answer for any shuttering situation.



- Custom-made products are possible.
- Simply ask us about it.

## APPLICATION

Longitudinal or transversal shuttering for all planar precast concrete elements with wall thicknesses of 45–400 mm and recesses

## ESPECIALLY SUITABLE FOR

- Stationary production
- Low level of automation
- Manual shuttering handling
- Protruding reinforcement
- Large number of variants of the produced precast concrete elements
- Field plants
- Complex contours of the precast concrete elements

## FEATURES



Extendable in height



Suitable for lifting beam



Wooden shuttering skin



Steel shuttering skin



Can be manipulated with a crane



Suitable for penetrating reinforcement

## DETAILED PROPERTIES

### Elements

- SPB Standard Pro Magnetic Box 1800 / 2100
- Clamping bracket
- Base profile
- Rib
- Transport pick-up
- Shuttering skin (provided by customer)

### Handling

- Handling by crane or lifting beam

### Dimensions

- Standard length 1000 mm, 2000 mm, 3000 mm, 4000 mm
- Special lengths on request
- The plywood can protrude 125 mm in length
- Standard width 120 mm (with SPB 305 / 445 mm)
- Standard heights 98 mm, 148 mm, 198 mm, 248 mm, 298 mm
- Max. shuttering height / element thickness 400 mm

### Highlights

- Excellent stability and shape retention – no bending
- Quick and easy assembly
- Quick and easy fixing
- Quick and easy height adjustment by replacing the ribs
- Space-saving storage
- Special locking parts for your rebar diameter in the accessories catalogue

## NOTES

- Lateral protrusion of plywood up to 125 mm, vertically up to twice the height of the base, but not exceeding 100 mm

## EXPANDABILITY



Height-adjustable (by changing the ribs)



Extendable (Coupling sheet sold separately)



Suitable for elements up to 1000 mm height due to vertical supports

# Application examples



Easy Form with continuous reinforcement



Easy Form with HT stop adapter



Easy Form in combination with UAR adapter



Easy Form in combination with UAR adapter for continuous reinforcement and upstand in the element

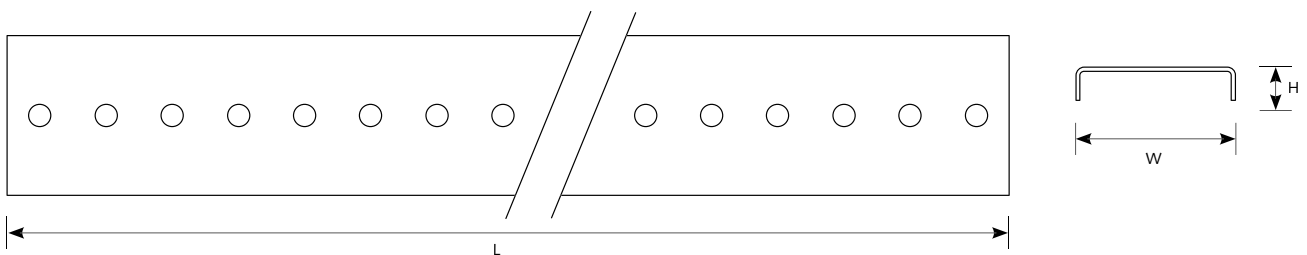


Easy Form with continuous reinforcement

# Products

## ➤ Easy Form base profile

Base profile as floor and cover plate.

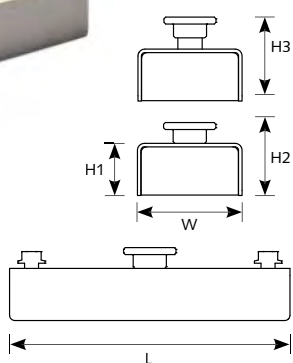
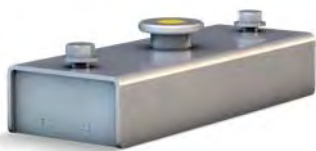


Article no.	64276	64129	64128	64290
L (mm)	1000	2000	3000	4000
W (mm)	120	120	120	120
H (mm)	25	25	25	25

# Accessories

## ➤ SPB Standard Pro Magnetic Box 2100

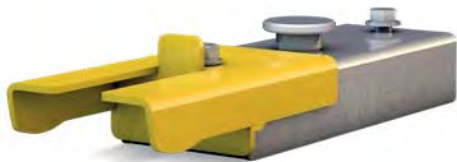
The basis for all applications in shuttering construction.



Article no.	03232
L (mm)	320
W (mm)	120
H1 casing (mm)	60
H2 switched (mm)	84
H3 released (mm)	94
Retaining force (kg)	2100

## ➤ Clamping bracket for fixing the base profile (transverse)

Clamping bracket for attachment to the SPB 2100 for fixing the base profile.



Article no.	65107
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## ➤ Clamping bracket for fixing the base profile (longitudinal)

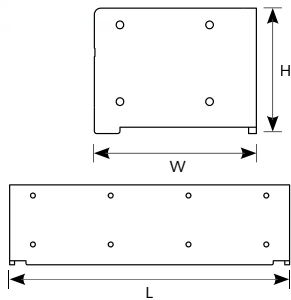
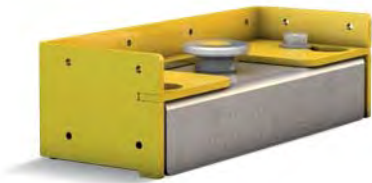
Clamping bracket for attachment to the SPB 2100 for fixing the base profile.



Article no.	64516
-------------	-------

## ➤ 3-sided attachment combo angle

For longitudinal or frontal fixing of plywood, suitable for SPB 2100.



Article no.	46441	69531	46446	69532	40336
L (mm)	342	342	342	342	342
W (mm)	126	126	126	126	126
H adapter (mm)	98	148	198	248	298

For bridging of intermediate lengths up to 600 mm.

## ➤ Easy Form ribs

Ribs for individual configuration of the shuttering height.



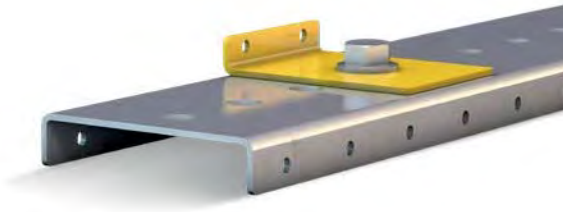
Recommendation for number of ribs:

Length of base profile in mm	Number of ribs
1000	4
2000	6
3000	8
4000	10

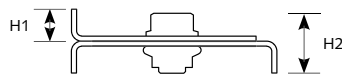
Article no.	64277	69640	64131	69641	64517
For shuttering height H in mm	100–200	150–250	200–300	250–350	300–400

## ➤ Angle adapter H = 45 – 60 mm for base profile

With screw holes for direct fixation of the wooden shuttering skin on the base profile.



Article no.	64307
H1 (mm)	20
H2 (mm)	45

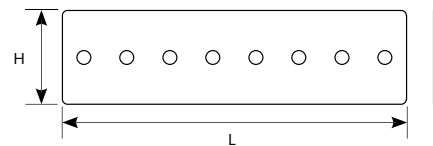


## ➤ Coupling sheet

For longitudinal butt joint of two Easy Forms.



Article no.	64301
L (mm)	400
H (mm)	110



## ➤ Wooden window corners

Corner angle for fixing and fracture-free demoulding in recesses



Article no.	On request
-------------	------------

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 An overview of all solutions for recesses is available from page 96.  
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## ➤ Transport receptacle, gripping knobs

Gripping knobs for handling the shuttering with the RATEC lifting beam.



Article no.

68841

## ➤ Transport receptacle lifting eye bolt M16x27

Lifting eye bolt for handling the shuttering with a crane.



Article no.

SC042085

## ➤ Steel Sleeves for rebar



Article no.

64311

64310

64313

64314

For rebar Ø (mm)

32

25

20

16

## ➤ Diagonal support for Easy Form



Always the right solution for every shuttering task: Easy Form can now also be used to produce beam and columns elements, such as supports and binders in variable dimensions. The Easy Form kit has been supplemented for this purpose by diagonal supports, which are attached to the SPB Standard Pro Magnetic Box to fix the shuttering vertically. Other possible applications, e.g. for the manufacture of lift shafts, are currently in the testing phase.

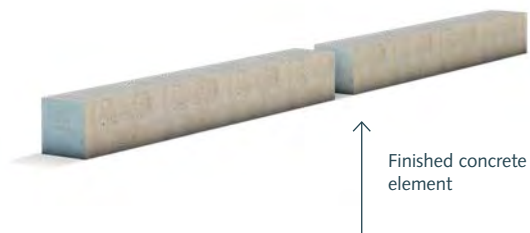
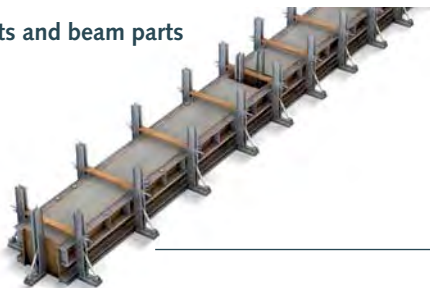


Vertical column consisting of:

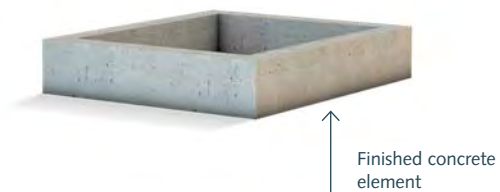
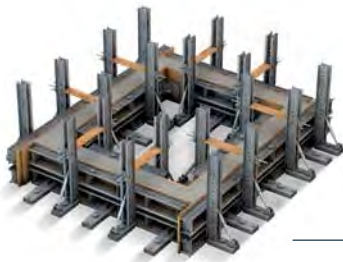
Quantity	Article no.	Name
1	03232	SPB 2100
2	43875	Hinge bracket
3	64277	Easy Form rib 49 mm
1	64459	Angular column
2	64276	Easy Form base profile 1000

## POSSIBLE APPLICATIONS

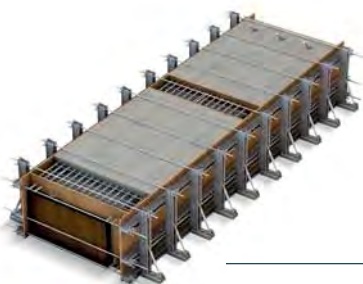
### ➤ Supports and beam parts



### ➤ Lift shafts



### ➤ Special shapes, e.g. u-shaped elements



## ➤ Lifting beams for handling

For manipulating the shuttering.



Article no.

On request

## ➤ Lifting tool for SPB 2100



Article no.

03292

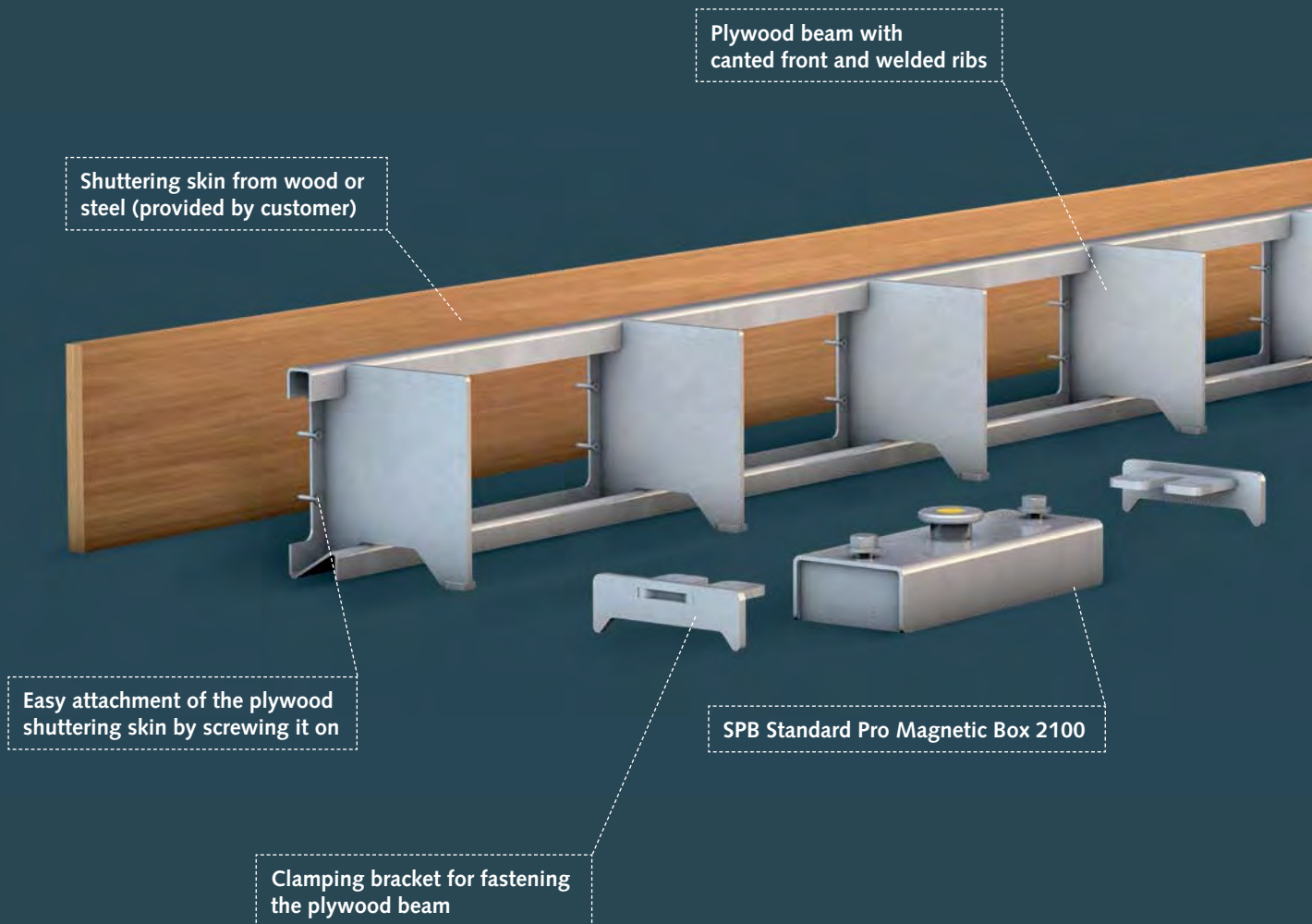
For

SPB 2100

# MST universal plywood beam

## Lightweight magnetic shuttering for manual handling

Simple and versatile - a wide variety of shuttering tasks can be easily accomplished with the MST. Thanks to its low weight, the MST is very easy to handle without a crane. The system's excellent static properties and flexibility make the MST a true all-rounder for manual operation.



- Custom-made products are possible.
- Simply ask us about it.

## APPLICATION

Longitudinal or transversal shuttering for all planar precast concrete elements with wall thicknesses of 100–500 mm

## ESPECIALLY SUITABLE FOR

- Stationary production
- Low level of automation
- Manual shuttering handling
- Large number of variants of the produced precast concrete elements

## FEATURES



Concretable on both sides



Stackable, extendable in height



Wooden shuttering skin



Steel shuttering skin



Can be manipulated manually

## DETAILED PROPERTIES

### Elements

- SPB Standard Pro Magnetic Box 1800 / 2100
- Clamping bracket
- Plywood beam
- Shuttering skin (provided by customer)

### Handling

- Easy positioning
- Easy attachment and removal of the shuttering skin
- Setup time under 10 minutes
- Insert parts can be attached to the plywood

### Dimensions

- Standard length 2980 mm – we will gladly trim the MST to a shorter length
- Standard width 178 mm
- Standard heights 98 mm, 148 mm, 198 mm
- Max. shuttering height / element thickness 500 mm, can be realised with two MSTs with a height of 198 mm each

### Highlights

- Excellent stability and shape retention – no bending
- Stackable or couplable for double-sided use
- Quick and easy fixing
- Easy manual handling, no crane necessary

## NOTES

- The plywood may protrude laterally up to 125 mm and in height up to 100 mm
- A maximum of two plywood beams can be stacked
- The plywood beam can be tailored to your individual requirements
- Detailed cutting and operating instructions are available on request from us

## EXPANDABILITY



Stackable for wall thicknesses of 100–500 mm



Can be coupled for double-sided use



Suitable for steel front (fixing set sold separately)

# Application examples



Recess with MST and wooden window corner



MST as a complete system for external shuttering and recess



MST stacked



Double-sided use

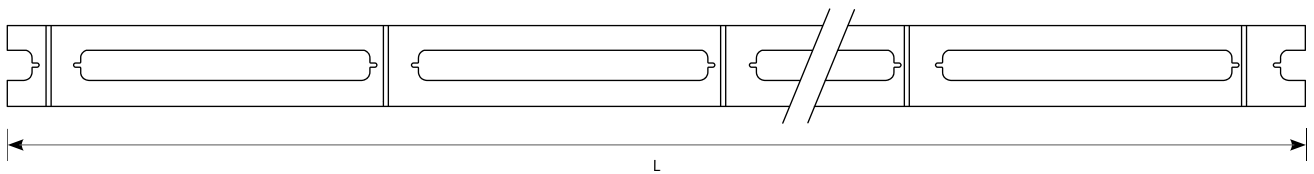
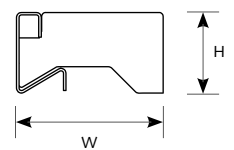
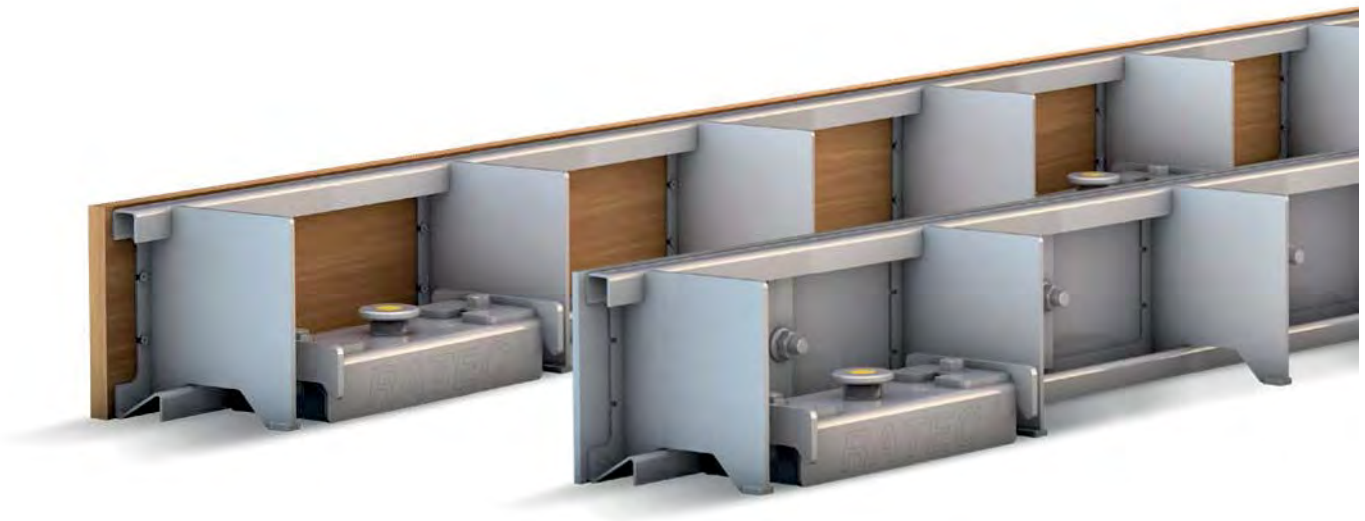


MST after concrete pouring

# Products

## ➤ MST base profile

Base profile for cladding with wood or steel.



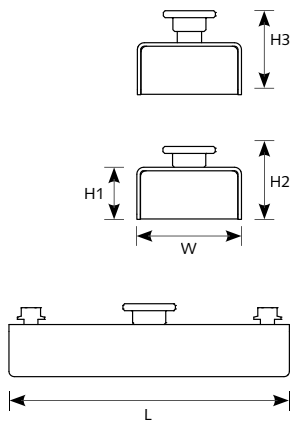
Article no.	63741	63807	63809
L (mm)	2980	2980	2980
W (mm)	178	178	178
H (mm)	98	148	198

Special lengths are available on request.

# Accessories

## ➤ SPB Standard Pro Magnetic Box 2100

The basis for all applications in shuttering construction.



Article no.	03232
L (mm)	320
W (mm)	120
H1 casing (mm)	60
H2 switched (mm)	84
H3 released (mm)	94
Retaining force (kg)	2100

## ➤ Wooden window corners

Corner angle for fixing and fracture-free demoulding in recesses

Article no.	On request
-------------	------------

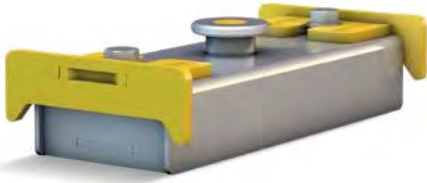


An overview of all solutions for recesses is available from page 96.



## ➤ Pair of clamping brackets for MST base profile

Clamping bracket for attachment to the SPB 2100 for fixing the MST base profile.



Article no.	53642
-------------	-------

## ➤ Attachment set for steel front



Article no.	63817	63827	63831
H (mm)	98	148	198

## ➤ MST connection plate

For longitudinal butt joint of two MST base profiles.



Article no.	63844	63843	63841
H (mm)	98	148	198

➤ Lifting tool for SPB 2100



Article no.	03292
For	SPB 2100

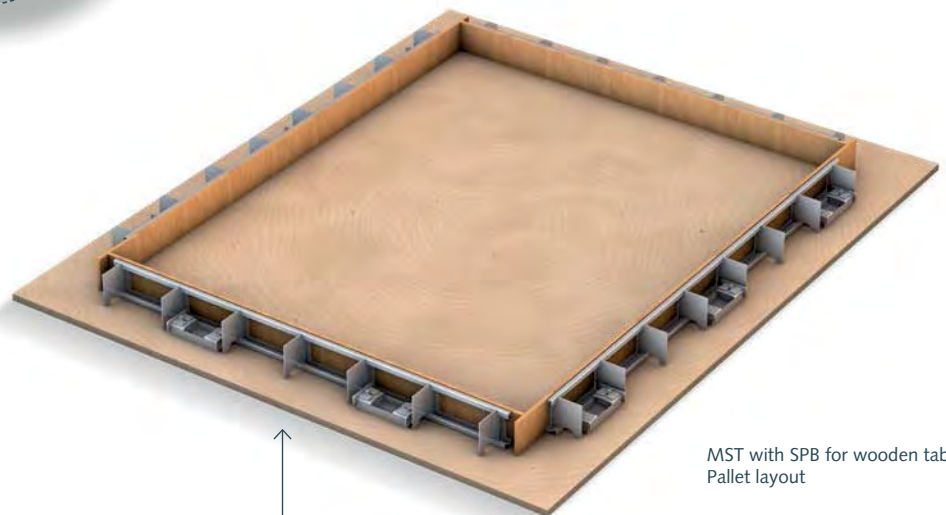
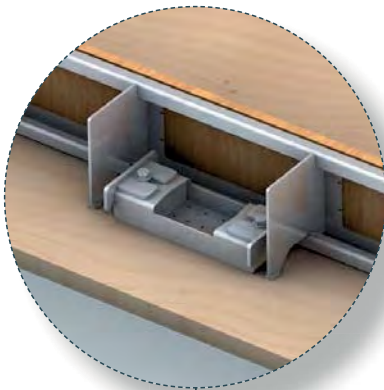
## ➤ MST universal plywood beam for wooden tables

**NEW**

We have adapted our popular solution for the simple shuttering of solid elements, the MST, for use on wooden shuttering tables. The core of the unique solution is a special SPB Standard Pro Box, which is attached to the table with screw holes in place of the magnets. The MST base profile is attached to the box as usual with a clamp. During calibration, the MST is placed assembled and the box is screwed to the pallet. For demoulding, only the clamping brackets are released and the plywood beam is removed. A re-measurement is therefore not required for the production of same sized elements.



Name Art. no.	SPB wood 40531
L (mm)	320
W (mm)	120
H casing (mm)	60



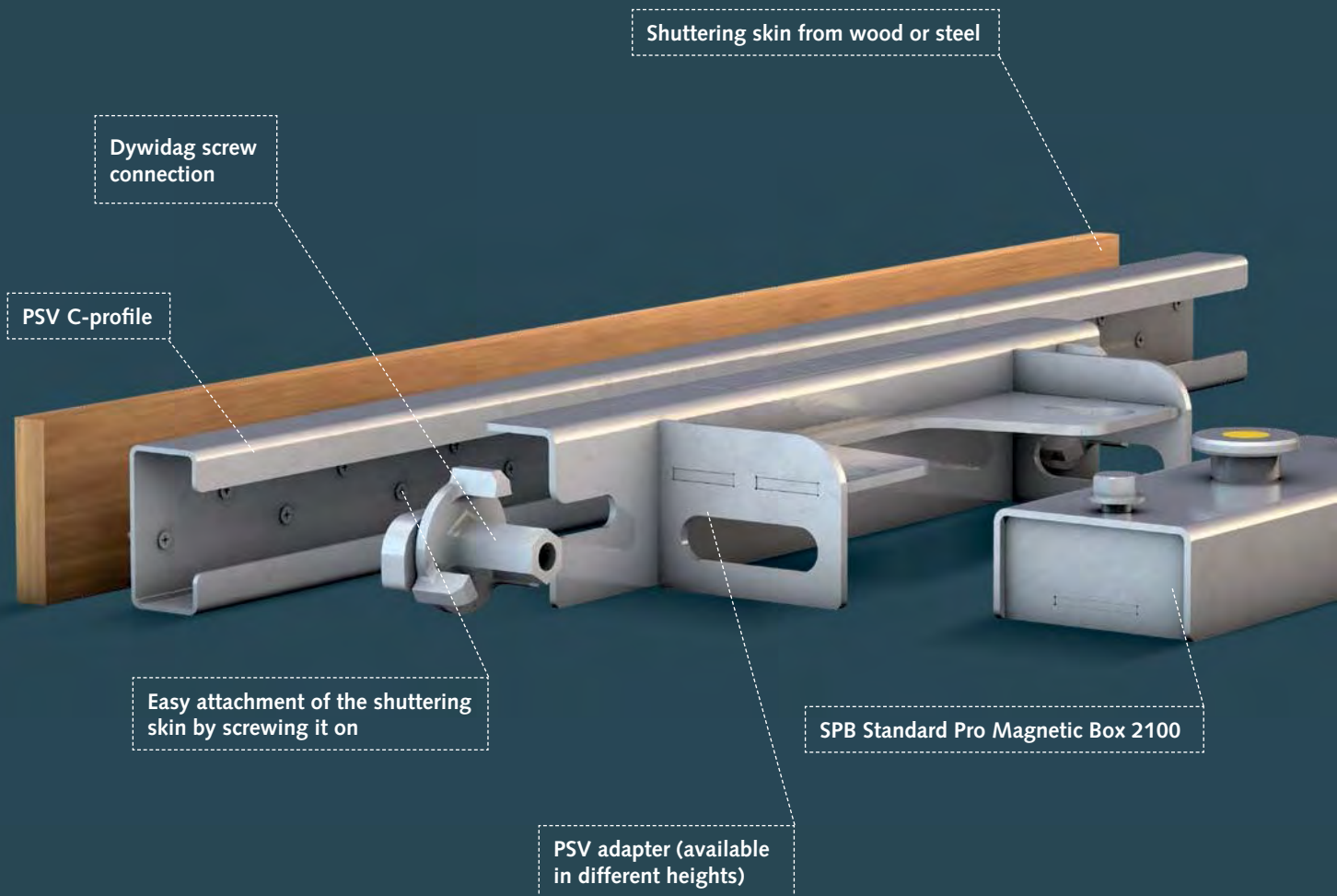
MST with SPB for wooden tables  
Pallet layout

Please note: With SPB for wooden tables, all adapter solutions for SPB and the flexible shuttering systems Easy Form and PSV can also be used simply and easily on wooden shuttering tables.

# PSV Pro System Vario

## The versatile classic

The PSV Pro System Vario is the classic all-rounder among adapter systems for the SPB Standard Pro magnetic box. Above all, customers benefit from its versatility and quick and easy manual handling. As a modular system, it is ideally suited for complex or frequently changing shuttering tasks, and it can be used very flexibly. Ideal areas of application are recesses for doors and windows, as well as top headers in support of other systems or solid edge shuttering.



- Custom-made products are possible.
- Simply ask us about it.

## APPLICATION

- Longitudinal or transversal shuttering for all planar precast concrete elements with wall thicknesses of 100–500 mm
- Door and window recesses
- Ideal in addition to SAS, MHS, MST and Easy Form

## ESPECIALLY SUITABLE FOR

- Complex and/or frequently changing geometries
- Stationary production
- Low level of automation
- Manual shuttering handling

## FEATURES



Wooden  
shuttering skin



Can be  
manipulated manually



Can be manipulated  
with a crane

## DETAILED PROPERTIES

### Elements

- SPB Standard Pro Magnetic Box 1800 / 2100
- PSV upper part with Dywidag screw connection
- C-profile
- Shuttering skin (provided by customer)

### Highlights

- Gapless longitudinal shuttering

### Dimensions

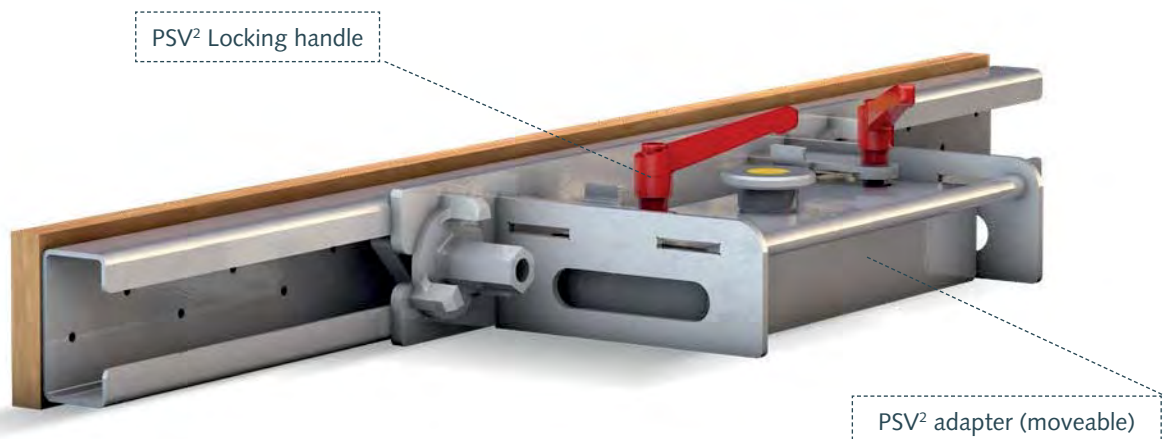
- Flexible shuttering lengths, gapless from 550 to 3500 mm through our standard C-profile length grid
- Height configurable by changing the adapter (solid concrete: 100–350 mm; sandwich: up to 500 mm)

### Handling

- Easy positioning by fixing and releasing at the push of a button
- Easy attachment and removal of the shuttering skin
- No crane required
- Easy assembly with the wood-clad C-profiles by means of Dywidag coarse-thread screws

## EXPANDABILITY

PSV<sup>2</sup> adapter for fast stripping and encasing  
More information on page 57.



# Application examples



PSV in action



PSV for transversal shuttering in combination with MHS



PSV² adapter



PSV in action

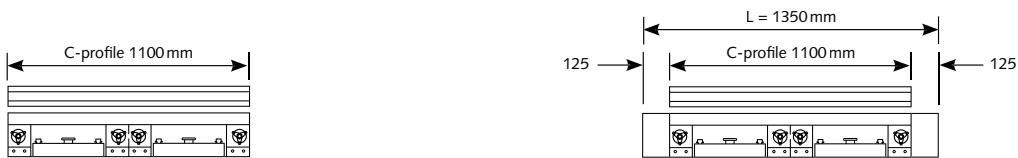


PSV² adapter

# Length diagram

Any shuttering length from 550 mm to 3500 mm can be implemented seamlessly with the standard length grid of the C-profiles of 250, 1100, 2000 and 3000 mm.

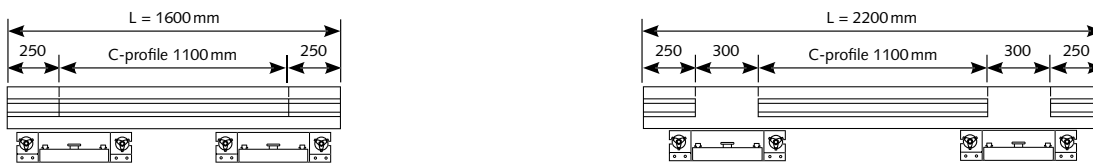
## ➤ Lengths from 1100–1350 mm



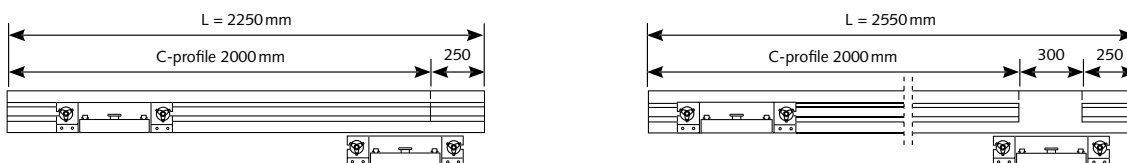
## ➤ Lengths from 1350–1650 mm



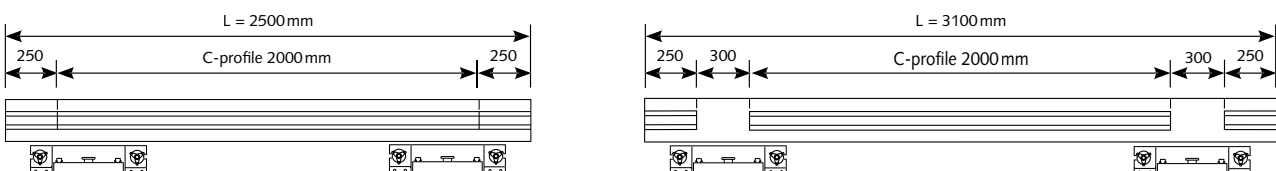
## ➤ Lengths from 1600–2200 mm



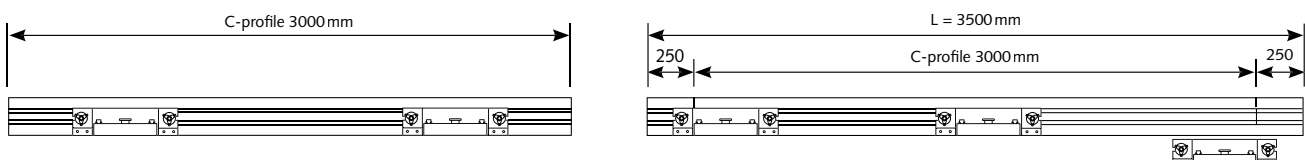
## ➤ Lengths from 2250–2550 mm



## ➤ Lengths from 2500–3100 mm



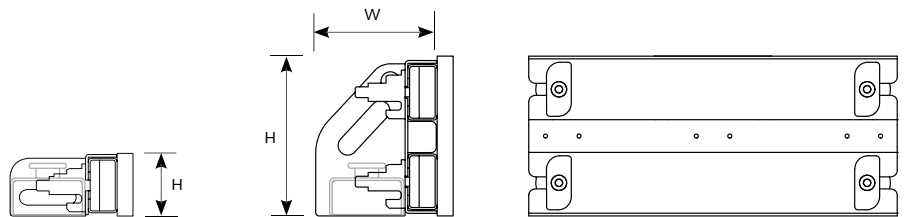
## ➤ Lengths from 3000–3500 mm



# Products

## ➤ PSV adapter

Upper part for SPB Standard Pro Magnetic Box 2100 for fixing the C-profile, concretable on one side.

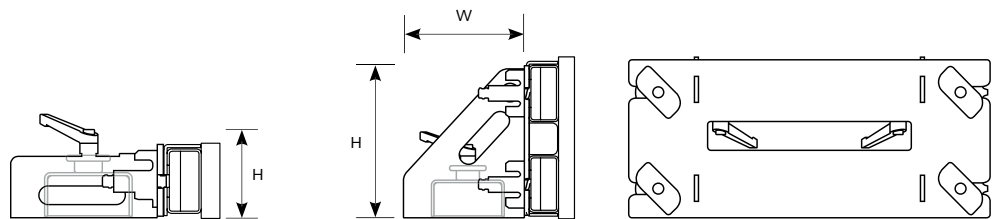


	Adapter 100/200	Adapter 150/250	Adapter 200/300	Adapter 250/350	Adapter 300/400	Adapter 400/500
<b>Article no.</b>	<b>04471</b>	<b>04420</b>	<b>02383</b>	<b>05321</b>	<b>01966</b>	<b>10054</b>
H adapter (mm)	100	150	200	250	300	400
B adapter (mm)	169	169	189	189	189	250
For shuttering skin with the height (mm)	100–200	150–250	200–300	250–350	300–400	400–500
Number of C-profiles	1	1	1	2	2	2



## ➤ PSV<sup>2</sup> adapter

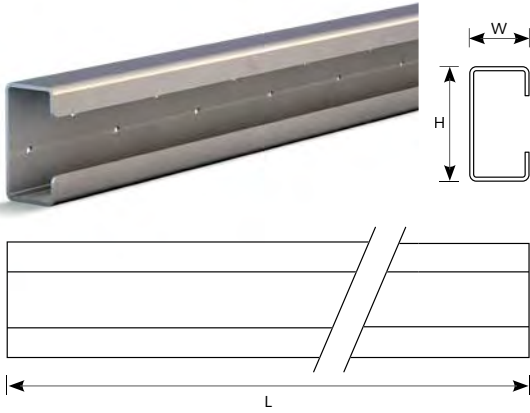
Upper part for SPB Standard Pro Magnetic Box 2100 for fixing the C-profile. What makes the PSV<sup>2</sup> adapter unique is that it can be retracted on the active magnetic box for stripping without having to move the magnetic box. This means that the SPB Standard Pro magnetic box does not have to be re-measured and repositioned in the next production step.



	Adapter 100/200	Adapter 150/250	Adapter 200/300	Adapter 250/350	Adapter 300/400	Adapter 400/500
<b>Article no.</b>	<b>18771</b>	<b>18772</b>	<b>18773</b>	<b>18775</b>	<b>18776</b>	<b>18777</b>
H adapter (mm)	100	150	200	250	300	400
B adapter (mm)	203	203	203	203	209	209
For shuttering skin with the height (mm)	100–200	150–250	200–300	250–350	300–400	400–500
Number of C-profiles	1	1	1	2	2	2

# Accessories

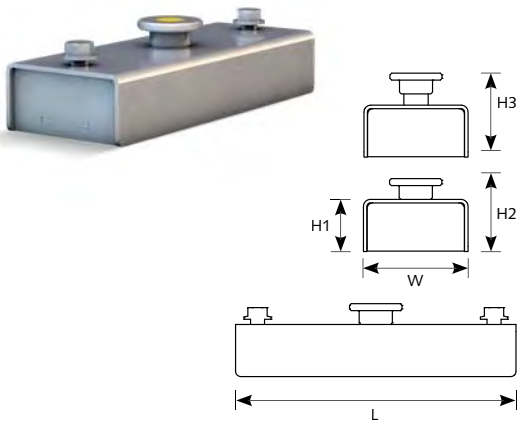
## ➤ PSV C-profile



Article no.	04472	05398	04495	04478
L (mm)	250	1100	2000	3000
W (mm)	46			
H (mm)	87			

## ➤ SPB Standard Pro Magnetic Box 2100

The basis for all applications in shuttering construction.



Article no.	03232
L (mm)	320
W (mm)	120
H1 casing (mm)	60
H2 switched (mm)	84
H3 released (mm)	94
Retaining force (kg)	2100

## ➤ Positioning aid for C-profile

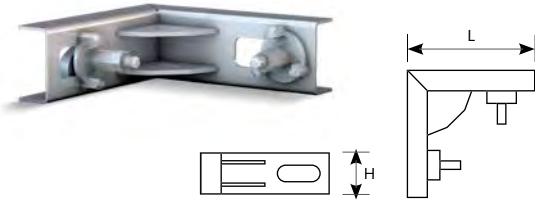
Attachment aid for exact positioning of the C-profile on the plywood.



Article no.	For PSV upper part
52114	100 / 200
52112	150 / 250
52116	200 / 300
51742	250 / 350
51747	300 / 400
51749	350 / 450
51750	400 / 500

## ➤ PSV corner angle

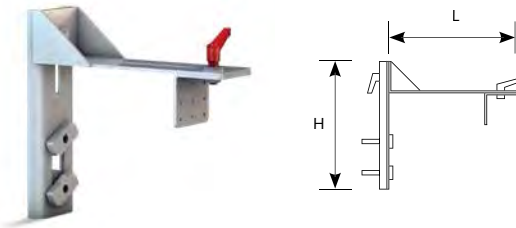
For secure corner connection of the C-profiles when stripping recesses.



<b>Article no.</b>	<b>26673</b>
L leg (mm)	300
H (mm)	98

## ➤ Extension arm for PSV

For attachment to the C-profile for fixing insert parts or upstands in the element.



<b>Article no.</b>	<b>49193</b>
L (mm)	400
H (mm)	400

Other heights and lengths are available upon request.

## ➤ PSV storage rack

For storage of SPB 2100 with mounted PSV adapter 100/200, 150/250 or 200/300.



<b>Article no.</b>	<b>08919</b>	<b>12552</b>
For adapters	100/200 150/250	200/300
Rack spaces	14	12

## ➤ Lifting tool for SPB 2100

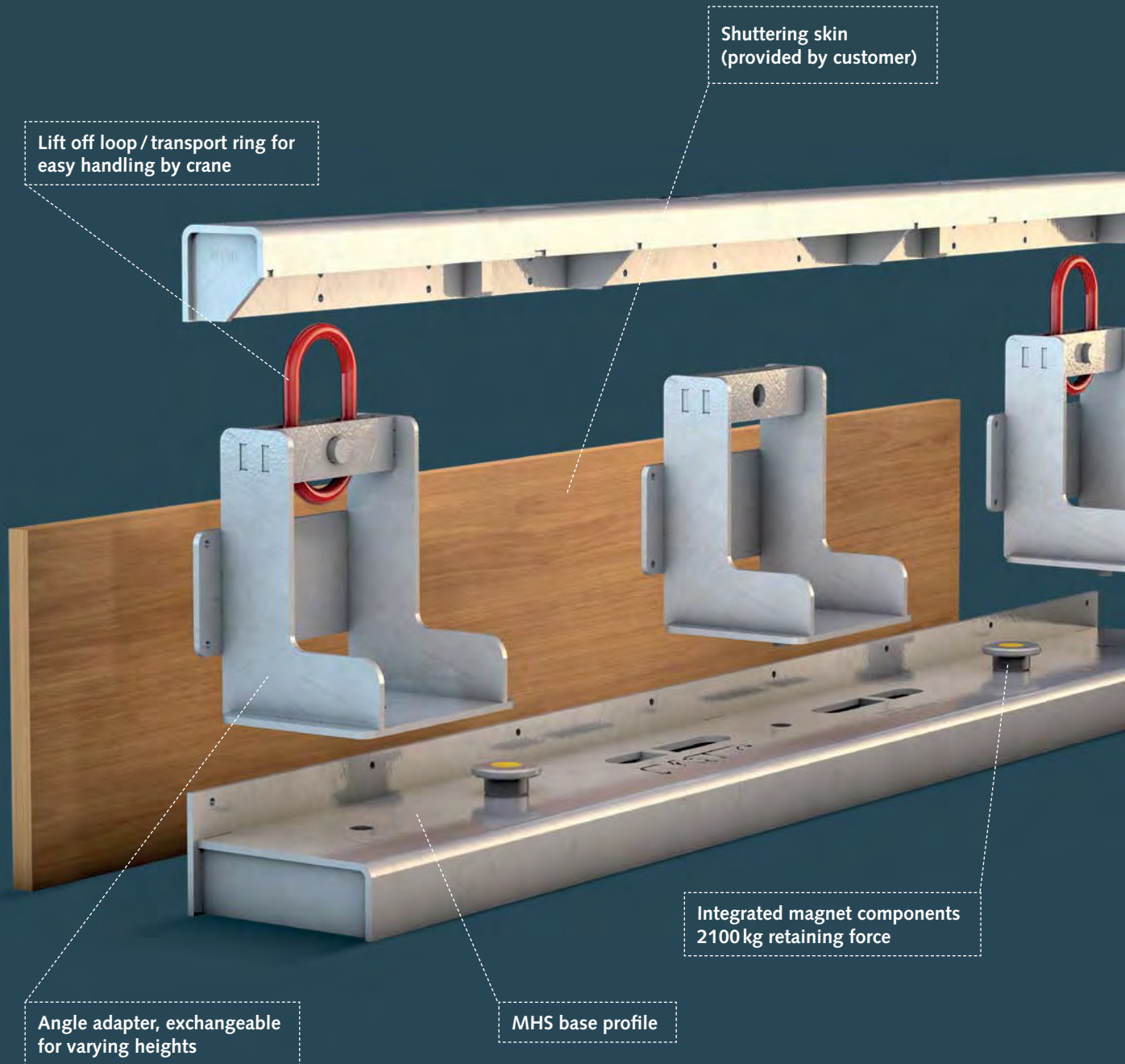


<b>Article no.</b>	<b>03292</b>
For	SPB 2100

# MHS Module Wooden Shuttering

## The robust all-rounder

The MHS is one of our standard solutions for the production of solid and sandwich elements up to 8000 mm in length. The MHS base profile features integrated magnets with a retaining force of 2100 kg and gives the shuttering stability and reliability. The combination of a base profile made from a sturdy, canted 6 mm steel plate and plywood makes the system reliable and allows it to be used flexibly. If needed, the MHS can be quickly and easily converted.



- Custom-made products are possible.
- Simply ask us about it.

## APPLICATION

As longitudinal and transversal shuttering for the production of solid and sandwich elements with up to 500 mm wall thickness, e.g. solid / sandwich walls, solid / sandwich ceilings, supports, binders, special beams.

## ESPECIALLY SUITABLE FOR

- Application as longitudinal shuttering
- Application as side shuttering for staircase moulds
- Stationary production
- Low level of automation
- Manual shuttering handling

## FEATURES



Wooden  
shuttering skin



Integrated, switchable  
magnets



Extendable in height



Can be manipulated  
with a crane

## DETAILED PROPERTIES

### Elements

- Integrated high-performance magnet

### Highlights

- Continuously adjustable from 100–500 mm
- Easy removal and attachment of the shuttering skin
- Easy handling by crane

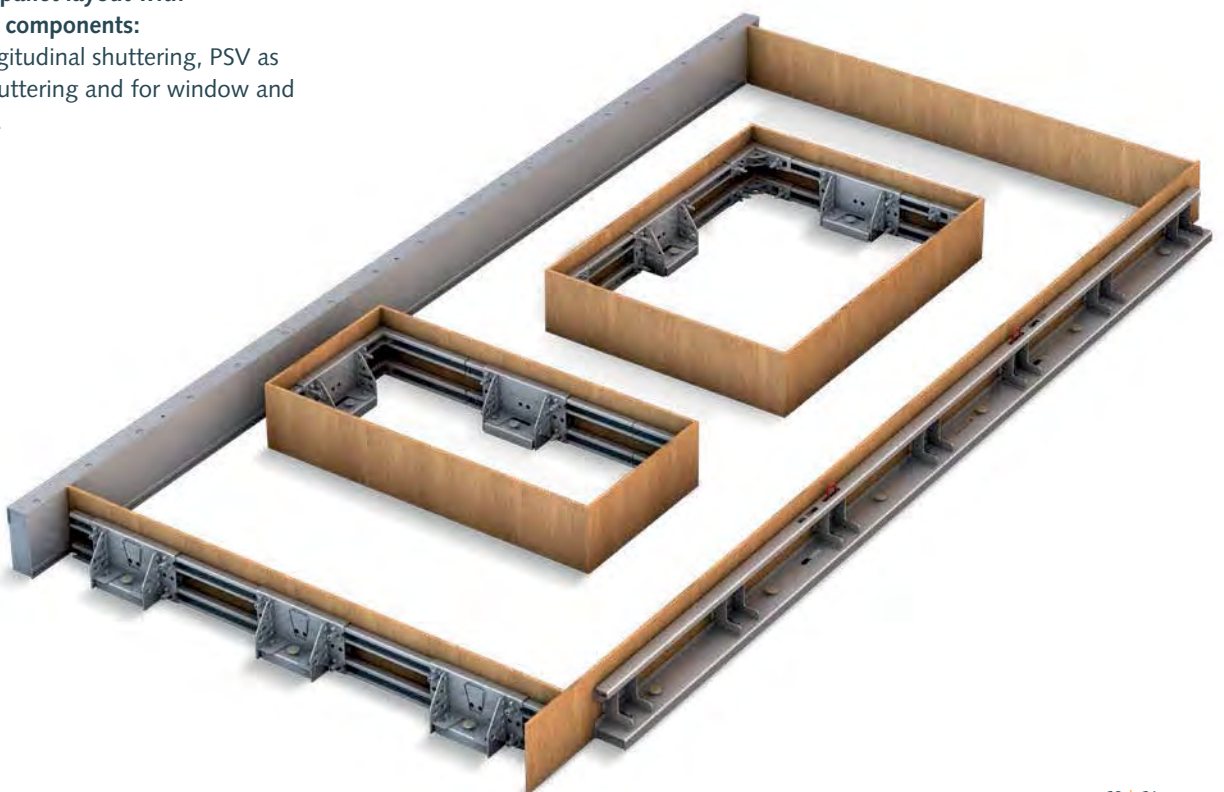
### Dimensions

- Shuttering lengths 2000–8000 mm
- Base width: 180 mm

## EXPANDABILITY

### Example of a pallet layout with the following components:

MHS as a longitudinal shuttering, PSV as transversal shuttering and for window and door recesses.



# Application examples



MHS as transversal shuttering



MHS in use



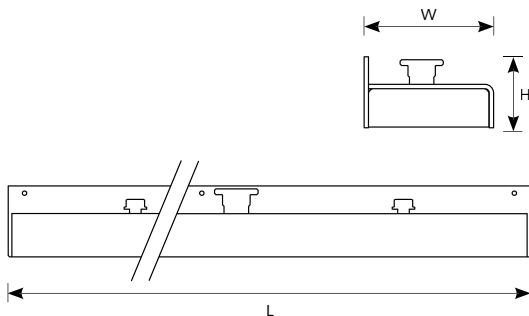
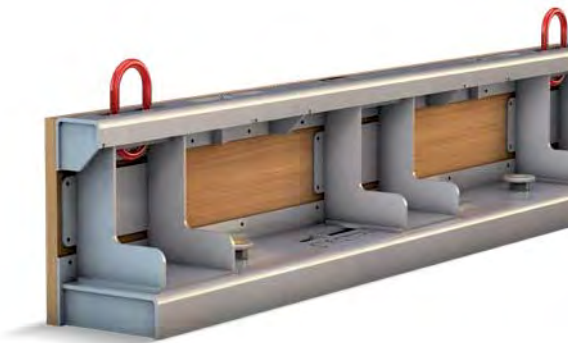
MHS as longitudinal shuttering



# Products

## ➤ MHS base profile

Base profile with upper part made of stable canted 6 mm steel plate with integrated high-performance magnets with a retaining force of 2100 kg each (the number of magnets depends on the length of the base carrier).



Article no.	L (mm)	W (mm)	H (mm) Base	Number of angles*
13425	1480	180	98	3
02336	1980	180	98	3
13427	2480	180	98	4
04176	2980	180	98	4
22823	3480	180	98	5
03888	3980	180	98	5
23360	4480	180	98	5
11743	4960	180	98	6
18254	5460	180	98	6
02086	5980	180	98	7
26028	6480	180	98	7
02335	6960	180	98	7
22043	7480	180	98	8
02143	7980	180	98	8

\*Of which always two angle adapters with transport ring.  
No angle is required for plywood heights from 100–200 mm.

## ➤ MHS angle adapter

MHS angle adapters with or without lift off loop / transport ring for easy handling by crane.



Article no.	H shuttering skin (mm)	Transport ring
02093	200 / 300	No
02094	200 / 300	Yes
02091	300 / 400	No
02092	300 / 400	Yes
19649	400 / 500	No
19650	400 / 500	Yes

# Accessories

## ↗ Lifting tool for MHS



Article no.

03292

## ↗ MHS rail slider

Transport trolley for detaching the MHS and for easy transport on the pallet.



Article no.

On request

L approx. (mm)

1600

Weight (kg)

6.8

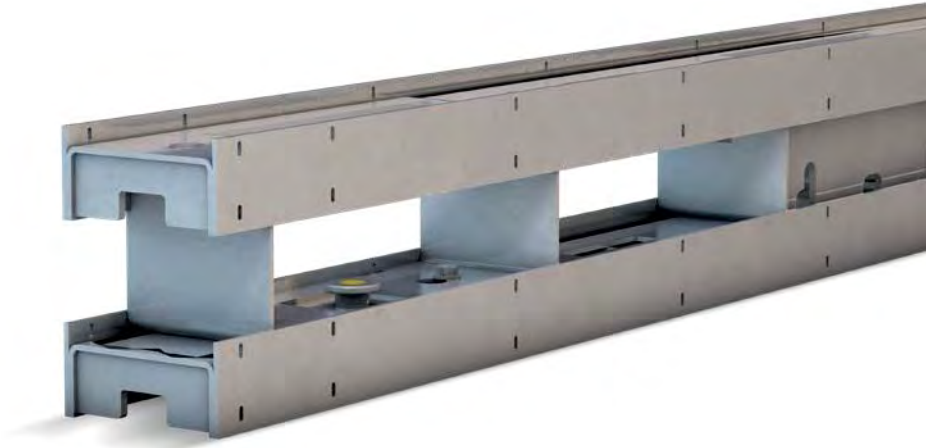


# Special solutions

*Examples of customised special solutions with MHS.*

## ➤ MHS concretable on both sides, with integrated SPB

Special solution with base profile concretable on both sides and angle adapter.



We would be happy to devise a tailor-made solution for you.

# SAS Standard Automatic Shuttering

## The system for individual configuration to your needs

The SAS Standard Automatic Shuttering is as unique as the shuttering challenges of our customers. We cut the system precisely to your requirements. The SAS is suitable for robots and can be configured for each shuttering robot. This makes it the perfect shuttering solution for automated operation, particularly in circulation systems. With integrated magnet components with a retaining force of 900–2100 kg, it reduces the shuttering work steps to mere positioning and activation of the magnets.



Optional:  
Telescopic for  
flexible lengths

Transport receptacles (crane,  
robot, etc.) freely selectable

Cover plate characteristics freely  
selectable (e.g. extendable)

Front face characteristic (telescopic, chamfer  
contour, smooth) freely selectable

Integrated magnet components  
with 900–2100 kg retaining force

Concretable on both sides as  
standard, one-sided version  
on request

Frontshell characteristics  
freely selectable

- Custom-made products are possible.
- Simply ask us about it.

## APPLICATION

Can be used as a complete system for the production of solid elements from 80 mm high as well as for supports, binders, special beams, stationary production as well as for circulation systems with and without shuttering robots.

Can be used in recesses set by robots.

## ESPECIALLY SUITABLE FOR

- ↗ Circulation systems
- ↗ Jobs with a shuttering robot
- ↗ Jobs with a high degree of automation

## FEATURES



Concretable on both sides



Integrated, switchable magnets



Extendable in height



Steel shuttering skin



Profileable according to customer requirements



Suitable for lifting beam



Suitable for robots



Can be manipulated with a crane

## DETAILED PROPERTIES

### Elements

- ↗ Integrated high-performance magnets

### Highlights

- ↗ High-precision laser-cut design
- ↗ SAS is configured according to customer requirements
- ↗ Handling with lifting beam, crane and robot possible.
- ↗ Extendable on request
- ↗ Telescopic on request

### Dimensions

- ↗ Shuttering lengths from 500–8000 mm
- ↗ Shuttering heights up to 500 mm

## EXPANDABILITY



Upper parts for height flexibility



Front side attachable design



Magnetic solutions for grouting groove with loops

# Application examples



SAS with special profiling of the frontshell



SAS can be configured for all common shuttering robots



SAS special version with recessed automatic component



SAS window solution



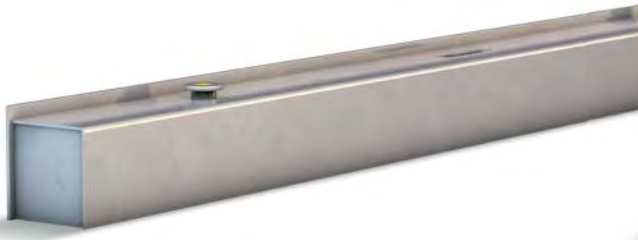
SAS storage



SAS profiling

# Standard versions

## ➤ Application



Concretable on one side



Concretable on both sides

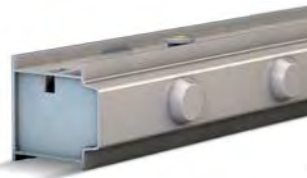
## ➤ SAS frontshell characteristics



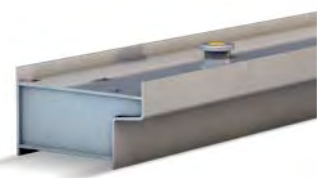
SAS steel frontshell characteristics smooth on one or both sides



SAS steel frontshell characteristics chamfer on top and / or bottom



SAS frontshell characteristics with grouting groove and shear key



SAS frontshell characteristics for slab support

## ➤ SAS cover panel characteristics



Transport receptacle, gripping knobs



Keyhole, receptacle for plug lifting beam



Crane attachments



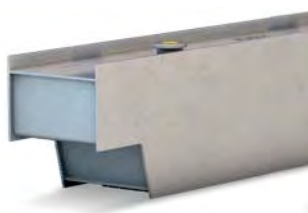
Screw connection for upper parts

## ➤ SAS front face characteristics

**NEW**



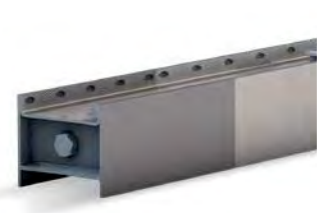
Chamfer on top and / or bottom



Profile



Telescopic for flexible lengths



Attachable at the front side

Additional characteristics can be produced. Ask us about it!

# Accessories

## ➤ Lifting tool for SAS



Article no.

03292

## ➤ Lifting beams for handling

Depending on the design, the SAS can be handled with various RATEC lifting beams.

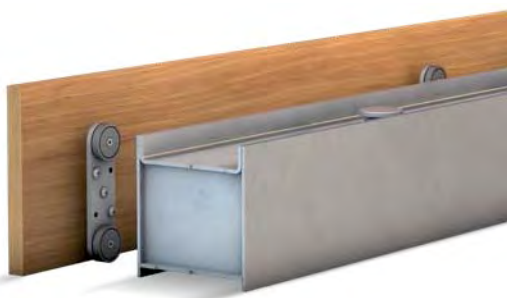


Article no.

On request

All lifting beams for handling can be found from page 102.

## ➤ Adapter plate for attaching a wooden front



Article no.

50413

H (mm)

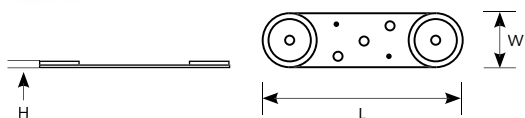
16

W (mm)

40

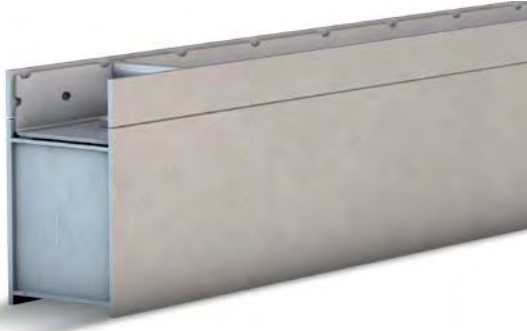
L (mm)

150



## ➤ Upper parts

We would be happy to realise different upper parts (concretable on one or both sides) for the extendable SAS pursuant to your requirements.



Article no.

On request

Max. height of the structure = double height of the base up to max. 200 mm

## ➤ Magnetic chamfer strip

For quick and clean formation of chamfers, drip moulds or dummy joints, suitable for attachment to a steel shuttering or on the pallet.



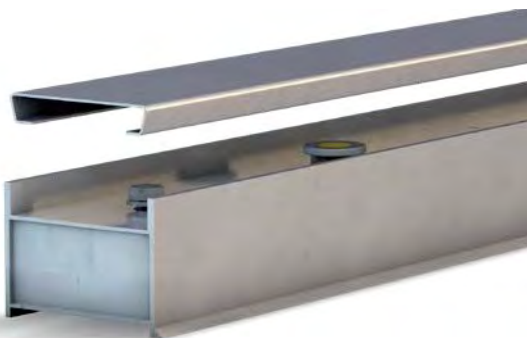
Article no.

On request

Our complete chamfer strip and trapezoidal strip range of products is available from page 110.

## ➤ Cover sheet

For covering the shuttering during concreting.



Article no.

On request

## ➤ Magnetic vinyl

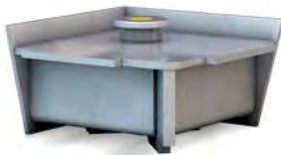
To cover openings in the shuttering's cover panel, such as keyholes, and to protect against the ingress of concrete.



Article no.	On request
Dimensions	By request
Material	Magnetic vinyl PF 518, magnetised multi-pole on single side

## ➤ Corner magnet

Corner magnet for recesses, including automatic magnet component with a retaining force of approx. 450 kg.



Article no.	On request
-------------	------------

## ➤ Recess solutions

We are pleased to offer robot-compatible recess solutions based on SAS.



Article no.	On request
-------------	------------

An overview of all solutions for recesses is available from page 96.

## ➤ Magnetic holder for cable loops

Magnetic recess body for cable loops to attach to a grouting groove.

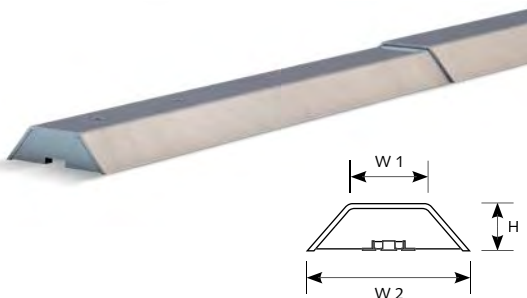


Article no.	On request
-------------	------------



## ➤ Telescopic grouting groove

Magnetic trapezoidal profile with telescopic slip-ons to implement grouting grooves. Can be place on the shuttering or on the pallet.



Article no.	60717
W 1 (mm)	50
W 2 (mm)	110
H (mm)	30

Telescopic length: from min. 1730 mm to max. 3550 mm

Other dimensions and lengths are available upon request!

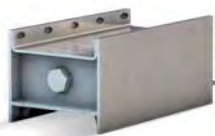
## ➤ Front face extension for SAS

**NEW**

SAS shuttering with frontal attachment for extensions of different lengths for more flexibility. The SAS shuttering has a welding nut attached. Attachments in flexible lengths can be screwed to them. As a result, the length of the shuttering can be varied by using fitting pieces of different lengths.



Article no.	On request
L (mm) from – to	Depending on the base length and retaining force of the integrated magnets. Contact us for details!



Front side



Back side

## ➤ SAS demoulding device

For fracture-free stripping of elements with grouting groove.



Article no.	On request
-------------	------------

# Special solutions

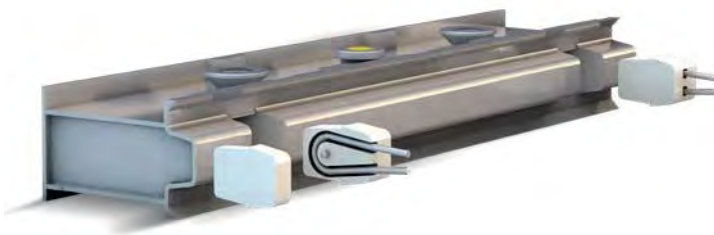
*Customised special solutions with the SAS Standard Automatic Shuttering.*

## ➤ Support boxes

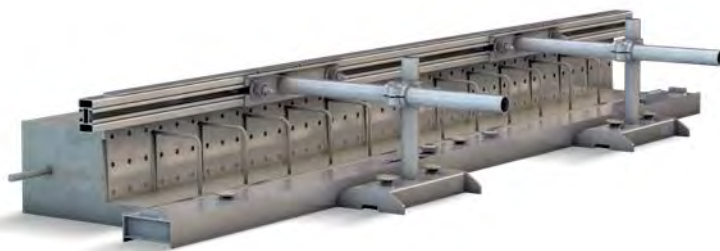
For fixing to an SAS for the production of slabs in the element



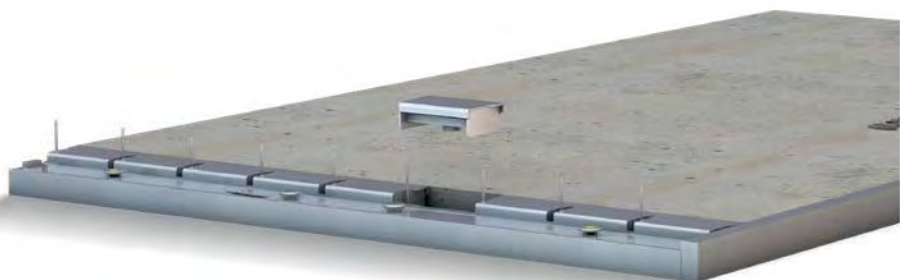
## ➤ SAS with integrated loop solution



## ➤ UAR adapter with SAS

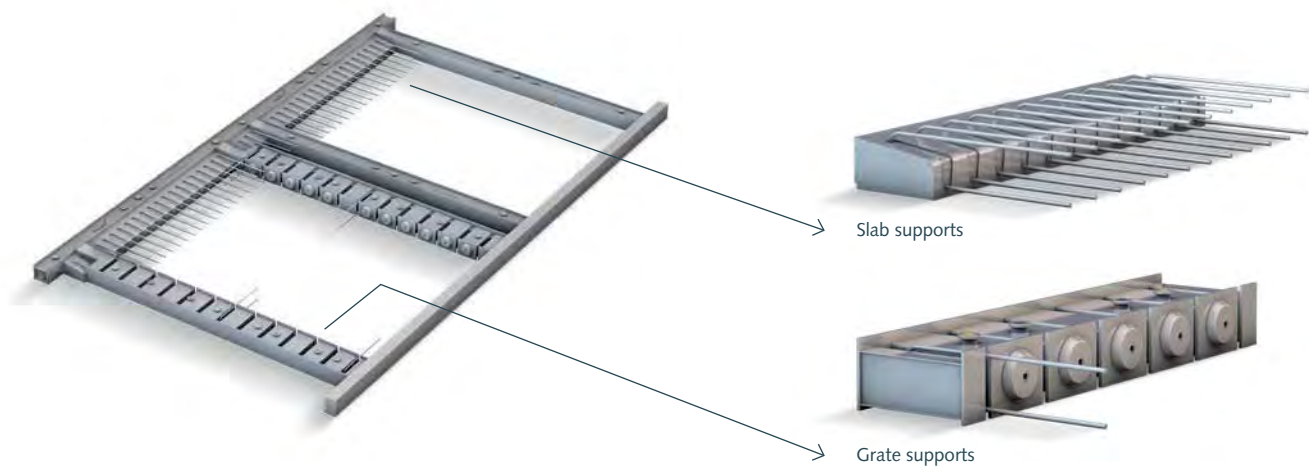


## ➤ Installation boxes for reinforcement overhang



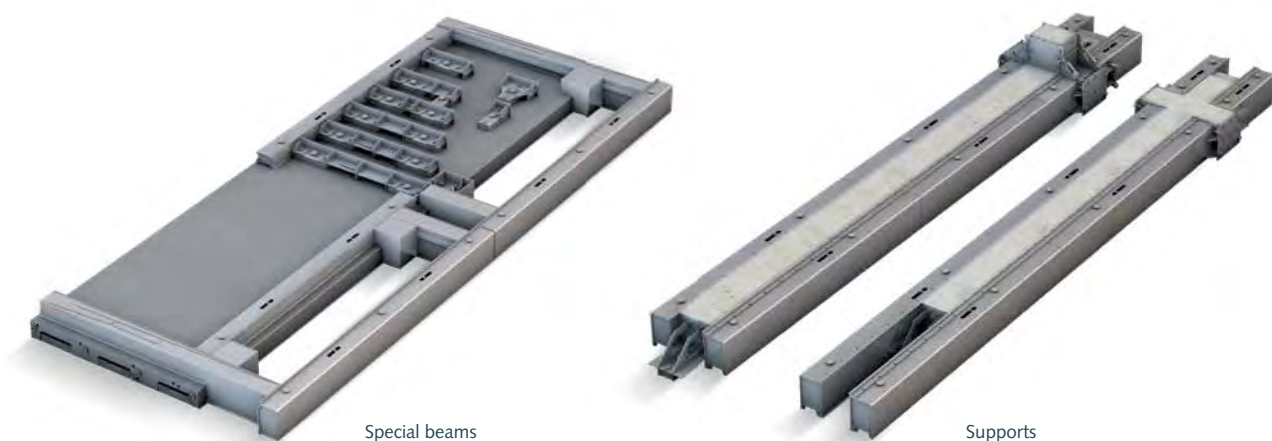
## ➤ Special solutions for elements with connection reinforcement

For Austrian customers, a robotic solution was developed to produce elements with connecting reinforcement and slab supports. The aim was to reduce future manual work and the use of plywood. A solution was realised by using standardised grate shuttering with integrated magnets, as well as a special ceiling slab support box with slots for the connection reinforcement. The grate supports are profiled with a round shear key.



## ➤ Special solution for columns and special beams

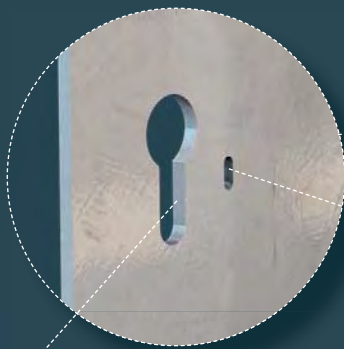
At the request of the customer, a special solution for the production of columns and special beams was developed based on the SAS Standard Automatic Shuttering. The aim was to achieve optimum pallet loading with fast shuttering times and a dimensional accuracy of  $\pm 1$  mm.



# SAS-MF Module Flex Shuttering

## The foundation for any situation

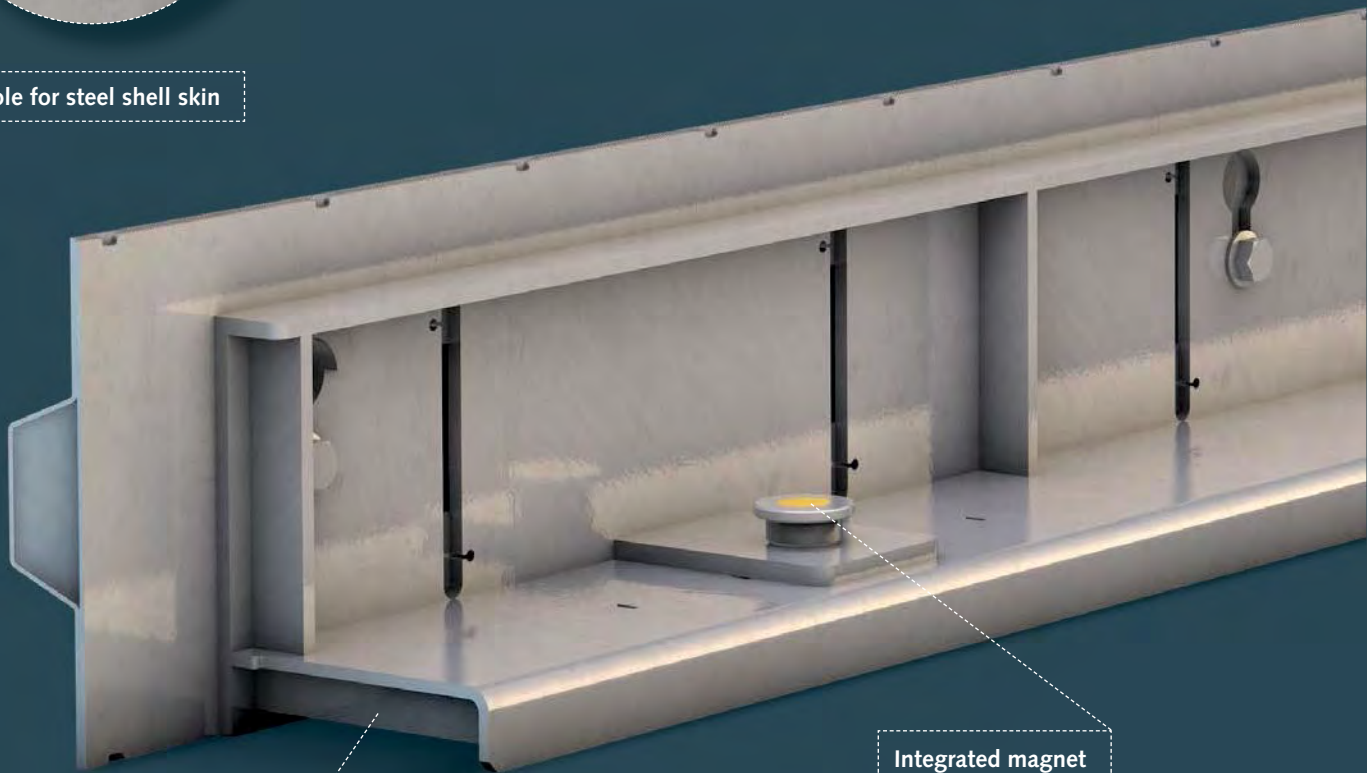
The AS-MF Module Flex shuttering system for solid and sandwich wall and ceiling panels is available in lengths of 500 mm to 8000 mm and features a modular variable height from 100 mm to 500 mm. The SAS-MF is optimised for quick shuttering skin changeovers and is suitable for many different types of shuttering skin (wood, alkus, smooth steel, tongue and groove, shear key, steel or rope connection loops). With a base, it is possible to implement various heights and shuttering shapes by changing the front plate. Even complicated element geometries and protruding reinforcements are possible.



Serves to accommodate a wide variety of shuttering skins, such as wood or steel. Profiles such as notch / tongue, shear key etc. are also possible.

Screw holes for plywood shuttering skin

Keyhole for steel shell skin



Integrated magnet components with 2,100 kg retaining force

Shuttering base with integrated high-performance magnets for fixing the extension modules

- Custom-made products are possible.
- Simply ask us about it.

## APPLICATION

Turnkey system for the production of bar, solid and sandwich elements with heights from 100–500 mm.

## ESPECIALLY SUITABLE FOR

- Frequently changing and / or complex shuttering skin geometries
- Protruding reinforcement
- Handling by crane or lifting beam
- The production of bar, solid and sandwich elements

## FEATURES



Integrated, switchable magnets



Steel shuttering skin



Wooden shuttering skin



Extendable in height



Suitable for lifting beam



Can be manipulated with a crane



Profiled according to customer requirements

## DETAILED PROPERTIES

### Elements

- Integrated high performance magnets with 2,100 kg retaining force each
- Sturdy 8 mm frontshell with 6 mm canted back
- Fitted as standard with screw holes for plywood, keyholes for steel plywood and slots for protruding reinforcement

### Highlights

- Easy handling by crane and lifting beam
- Flexible modular design through the use of front plates for shuttering base in heights from 100–400 mm

### Dimensions

- Shuttering lengths 500–8000 mm
- Width of the shuttering base: 100–200 mm

# Application examples



Pile shuttering based on the SAS-MF



SAS-MF with recesses



SAS-MF in solid wall production

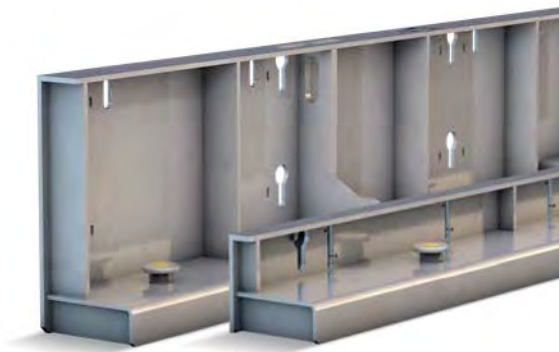


SAS-MF with extension modules for continuous reinforcement

# Products

## ➤ SAS-MF shuttering base

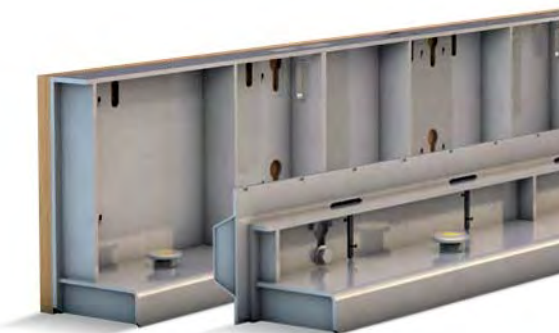
The shuttering base for attaching various extension modules is manufactured individually pursuant to your specifications.



Article no.	On request
L (mm)	500–8000
W (mm) of the shuttering base dependent on H	100–200
H (mm)	100–400

## ➤ Front plate modules for SAS-MF shuttering base

Examples of wood front and steel front. The plywood shuttering skin is screwed to the shuttering base via screw holes. Steel front plate modules are suspended on the keyholes. We produce front plate modules individually pursuant to your wishes.



Article no.	On request
-------------	------------

# Accessories

## ➤ Lifting tool for SAS-MF



Article no.

03292

## ➤ Lifting beams for handling

Special lifting beam for easy handling of the SAS-MF. It is held by special receiving lugs on the shuttering.



Article no.

On request

An overview of lifting beams is available from page 98.

## ➤ Recess solutions

You can rely on our vast solutions for window and door recesses.



Article no.

On request

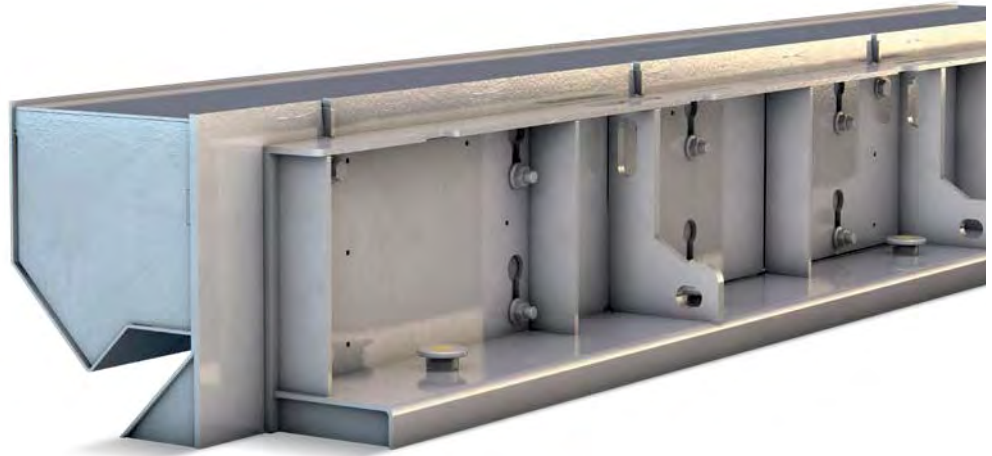
An overview of our recess solutions is available from page 96.



# Special solutions

*Intelligent special solutions for the SAS-MF Module Flex shuttering*

## ➤ Complex frontshell shapes



## ➤ Pile shuttering

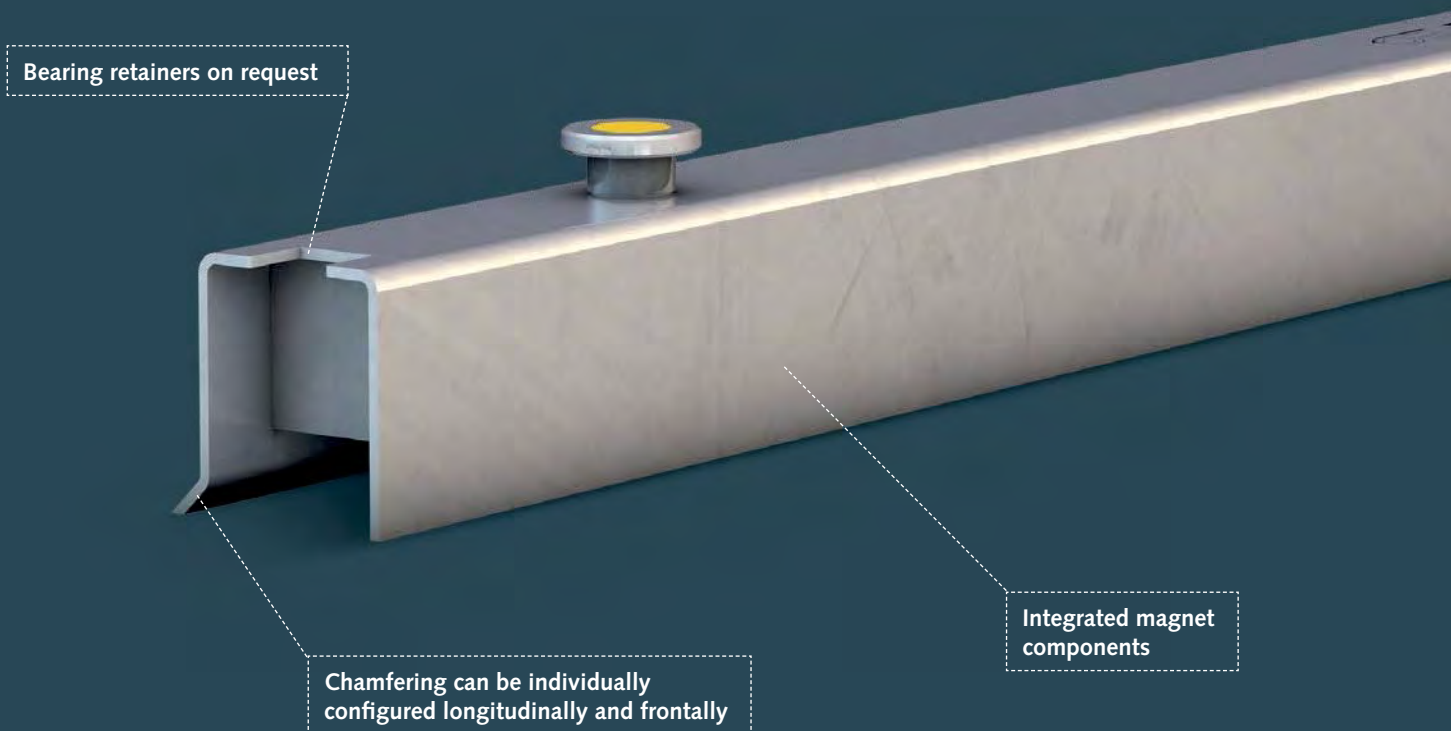


## RT U60 Pro

# The quick and economical system for girder slab and double wall production

*Proven over many years and used in leading plants.*

The RT U60 Pro shuttering system for the production of girder slabs and double walls is tailor-made pursuant to all customer requirements, such as robot handling, chamfering options, bearing fixtures and much more. With built-in magnetic automatic based on our "Made in Germany" Pro Magnet series, the RT U60 Pro is extremely reliable and durable.



- Custom-made products are possible.
- Simply ask us about it.

## APPLICATION

Turnkey system for the production of girder slabs and double walls with element heights of 50–100 mm

## ESPECIALLY SUITABLE FOR

- Circulation systems
- Jobs with a high degree of automation
- Jobs with a shuttering robot
- High quality requirements on chamfering precision

## FEATURES



Integrated, switchable magnets



Concretable on both sides



Steel shuttering skin



Suitable for robots



Can be manipulated manually

## DETAILED PROPERTIES

### Elements

- Canted 3 mm U-profile with machined contact surface for clean shuttering edges

### Highlights

- Easy positioning
- Easy removal and attachment of the shuttering
- Robot compatible for all robot manufacturers
- Easy handling, also manually
- Suitable for the production of girder slabs and double walls

### Dimensions

- Shuttering lengths: 450–3980 mm
- Height: 50–100 mm

## EXPANDABILITY



**NEW**

Magnetic attachment for the fixation of glass fibre upstands



Slip-on profile for extending the shuttering

# Application examples



RT U60 Pro with offset



Suitable for space-saving storage



Girder slab production



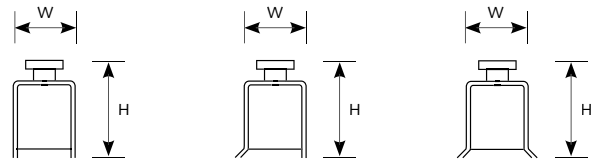
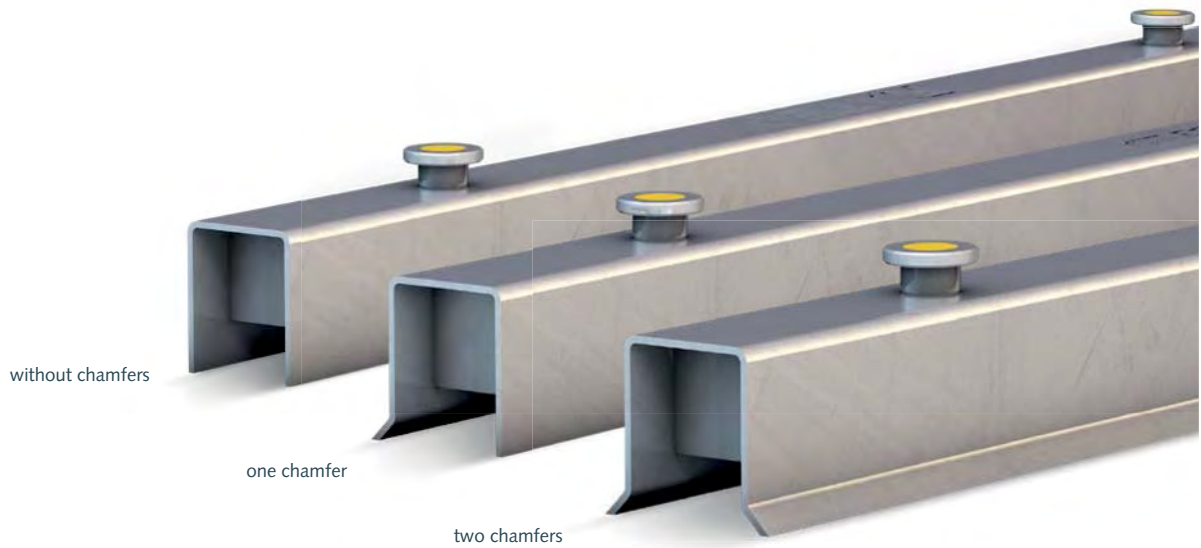
Suitable for robot operation



RT U60 Pro with double wall adapter (page 87)

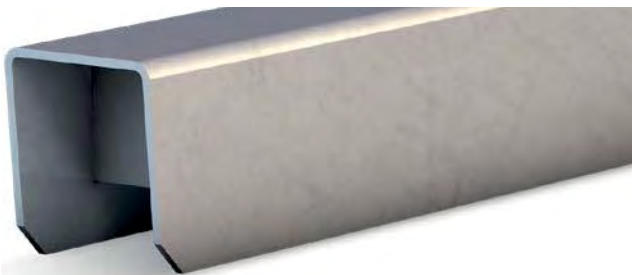
# Standard versions

## ➤ RT U60 Pro

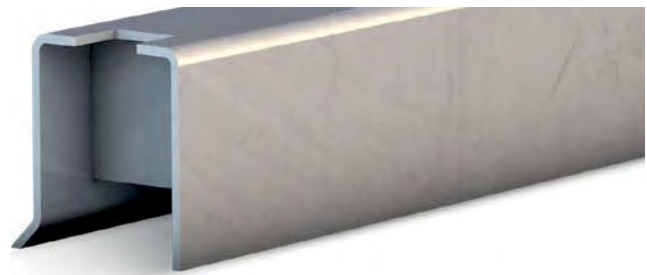


Article no.	On request
Steel plate (mm)	3
W (mm)	60
H (mm)	60, 65, 70, 75,80, 85, 90, 95, 100

### Options:



Frontal chamfer and / or draft angles



Bearing retainer

Additional characteristics can be produced. Ask us about it!

# Accessories

## ↗ Lifting tool for RT U60 Pro



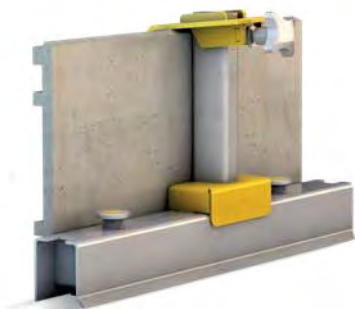
Article no.

03299

## ↗ Glass fibre attachment

**NEW**

Space-saving attachment solution for the RT U60 Pro for holding down glass fibre upstands, with integrated SPB Standard Pro magnetic box 450 kg (not switchable). The attachment consists of one upstand-stabilising pipe profile and is easy to fix to the shuttering by means of an elongated stopper plate.



Article no.

84548

85027

H (mm)

230

350

Other heights are available on request.

## ↗ Slip-on profiles

To extend the shuttering with or without integrated magnets.

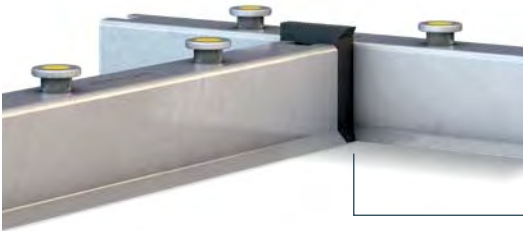


Article no.

On request

## ➤ Magnet clip

For bridging a frontal chamfer.

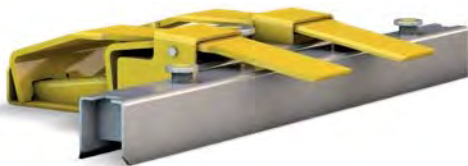


Article no.	On request
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## ➤ Double wall adapter

For holding down precut shims when turning for double-wall production.  
Clamping range from 60–85 mm, with milling plate from 55 mm.

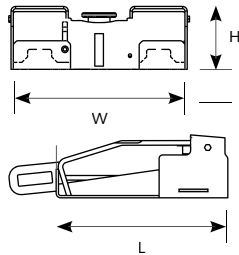


Article no.	61953
L approx. (mm)	300
H approx. (mm)	110
W approx. (mm)	300
Retaining force (kg)	2100
Max. load per adapter approx. (kg)	250



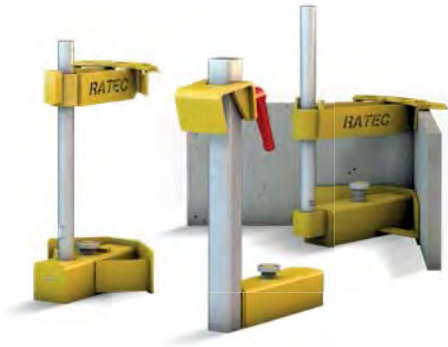
Video about the double wall adapter

Scan QR code!



## ➤ Speedy H, Speedy GF, Speedy GFS

For fixing window shuttering, glass fibre upstands or plywood shuttering.



	Speedy H	Speedy GF	Speedy GFS
Article no.	03118	02858	48029
Max. H (mm)		400	

## ➤ Quicky precast dowels

The compact single piece precast dowel. Assembling and disassembling parts is not required. The threadless sleeve allows the anchoring screw to be turned in and out with an electric screwdriver in seconds.

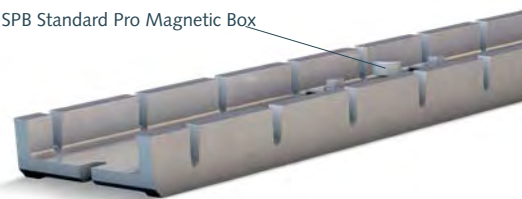


	Quicky	Quicky TSI	Quicky porous concrete
Article no.	01250	05832	02150

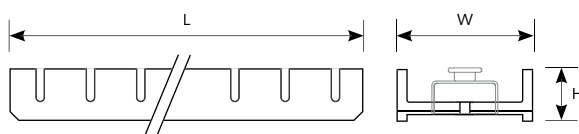
## ➤ Tooth comb / hob-blade insert

As transversal shuttering for elements with protruding reinforcement, from TIVAR or steel. Optionally with integrated SPB Standard Pro Magnetic Box.

SPB Standard Pro Magnetic Box



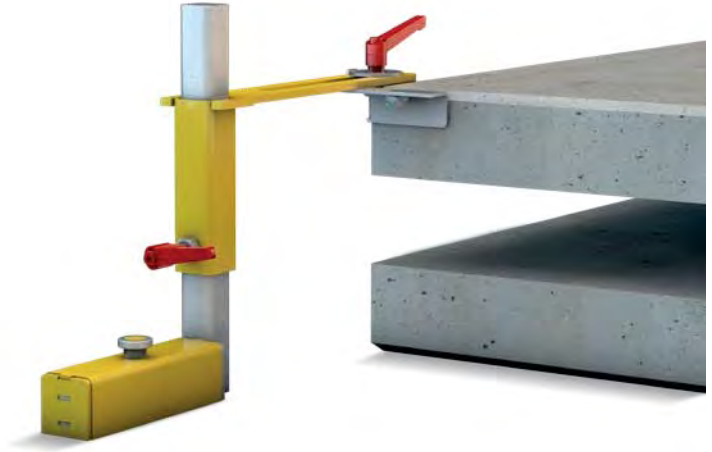
Article no.	On request
Design L, W, H	According to your specifications



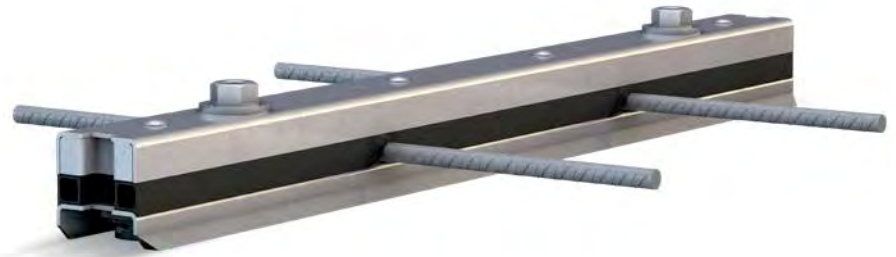


# Special solutions

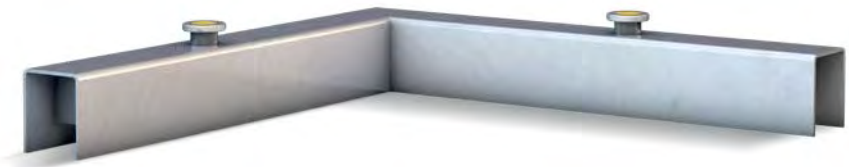
## ➤ Speedy GFS for fixing of thermal walls



## ➤ Two-part RT U60 Pro for protruding reinforcement



## ➤ RTU corner shuttering

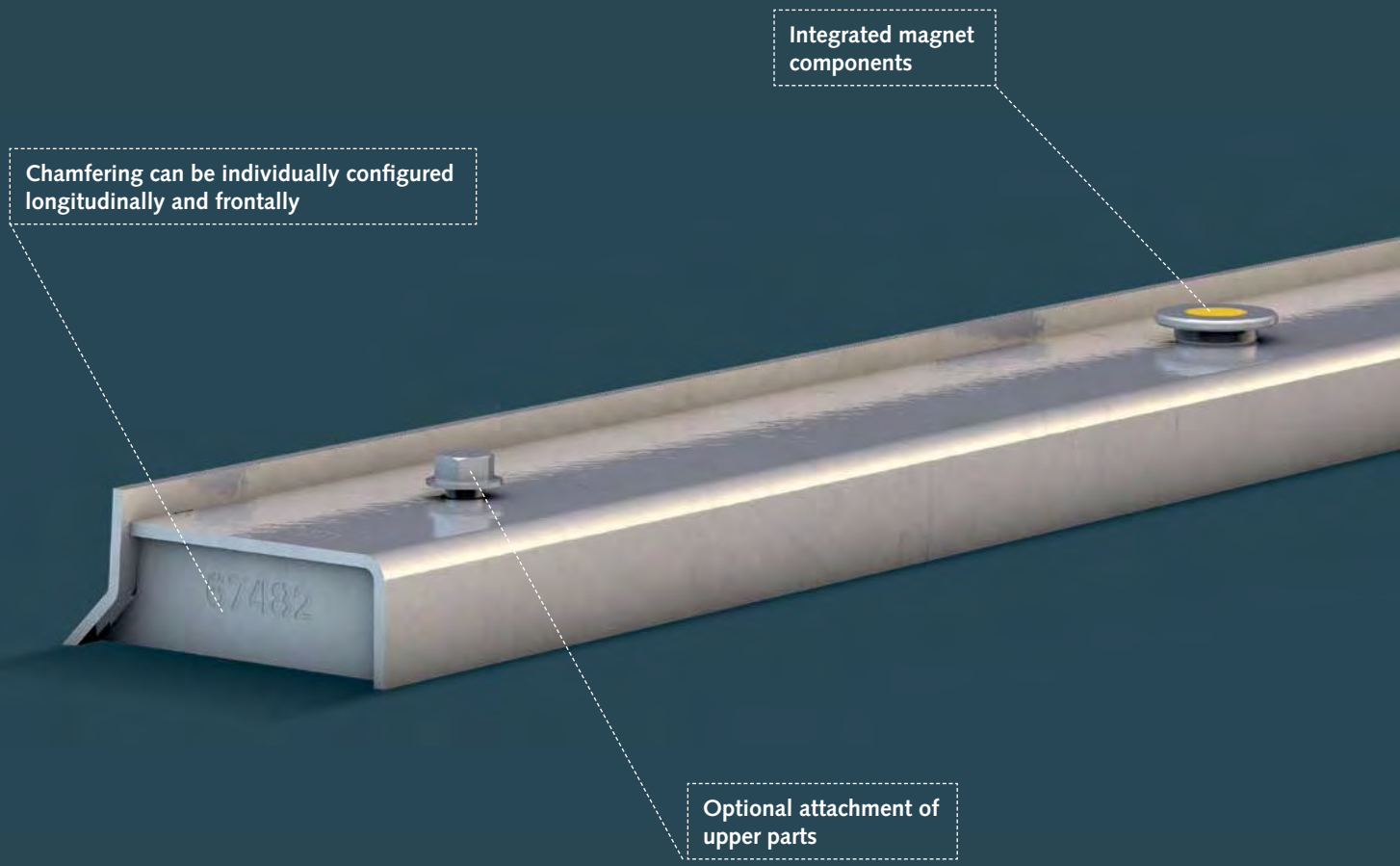


# TT Pro slab shuttering

## Safe and efficient: the fastest shuttering system for TT slabs

The TT Pro slab shuttering system from RATEC makes shuttering and demoulding of TT slab elements as easy as it gets. The system reduces the setup and changeover time by more than 5%. No crane is needed.

When combined with the SPB 900 and the clamping adapter for the top header as well as the EURO RTM 900 for web shuttering, no welding is necessary, which reduces the setup time even further. The economy of scale is unbeatable.



- Custom-made products are possible.
- Simply ask us about it.

## APPLICATION

Production of TT slab elements

## ESPECIALLY SUITABLE FOR

- Stationary production
- Low level of automation
- Manual shuttering handling

## FEATURES



Integrated, switchable magnets



Steel shuttering skin



Extendable in height

## DETAILED PROPERTIES

### Highlights

- Integrated high-performance magnet
- Low tare weight for easy handling of the shuttering
- Customer-specific production with regard to lengths, heights and shape

### Dimensions

- Standard length 500–3980 mm
- Standard width 60–200 mm
- Standard height 45–120 mm

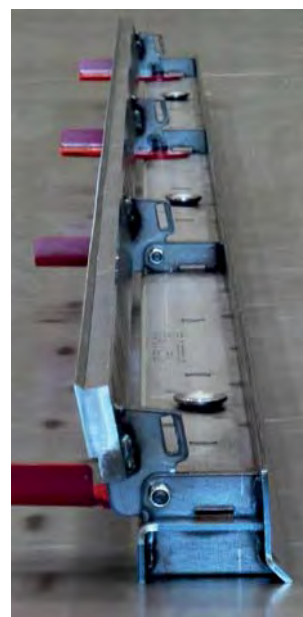
### Handling

- Easy positioning
- Easy attachment and removal of the shuttering
- Low intrinsic weight (no crane needed)

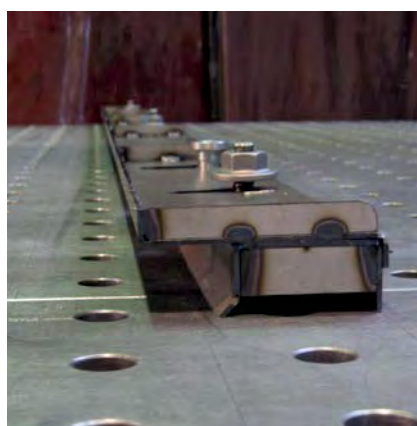
# Application examples



TT slabs production



Special solution for TT Pro with foldable top

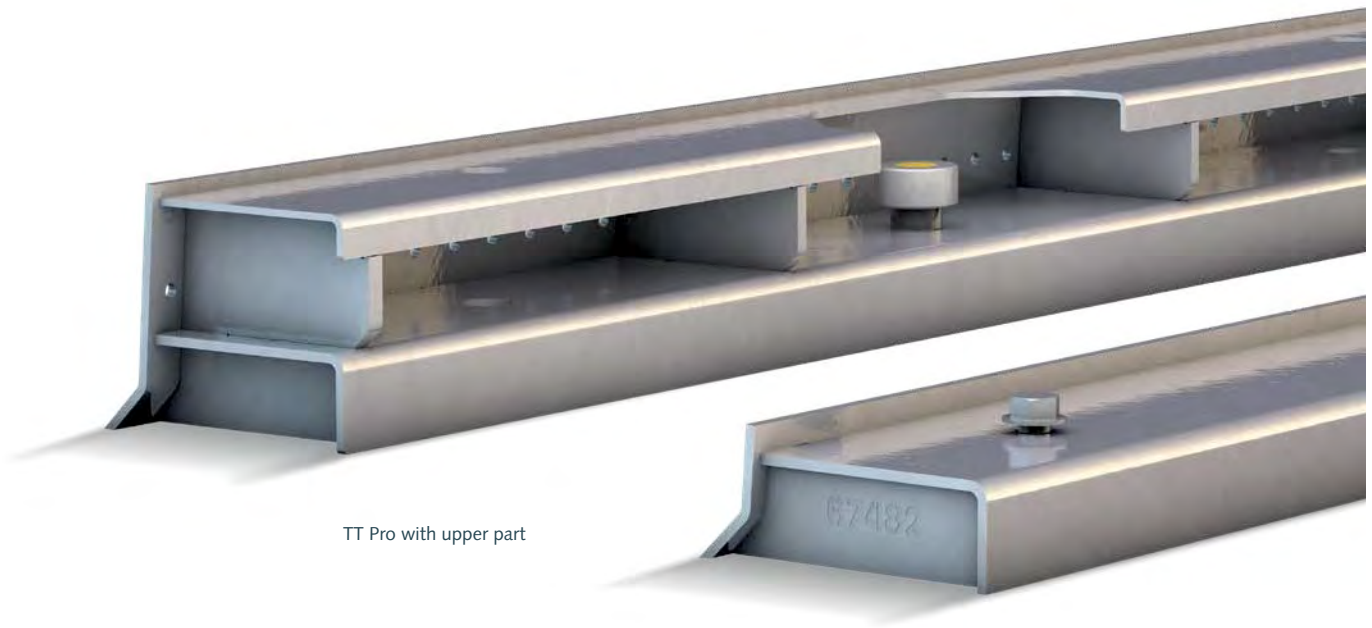


TT Pro with special profiling



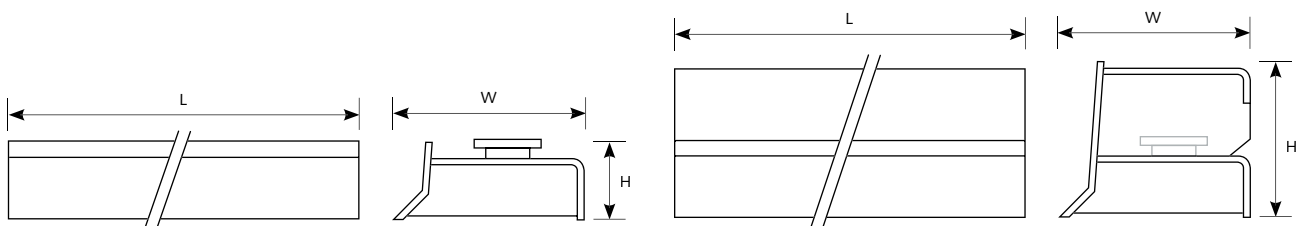
# Standard versions

## ➤ TT Pro longitudinal shuttering



TT Pro with upper part

TT Pro Standard



Article no.	On request
L (mm)	500–3980 mm
W (mm)	60–200 mm
H (mm)	45–120mm (above upper parts)

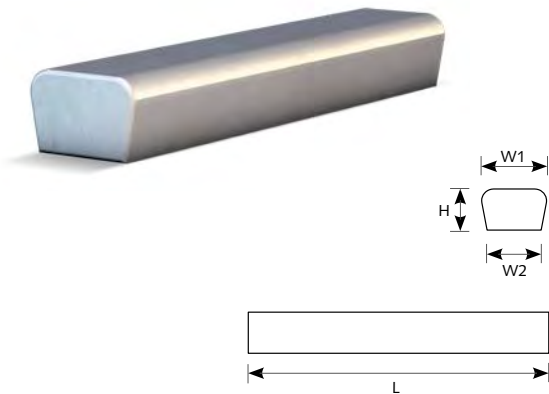
# Accessories

## ↗ Lifting tool for TT Pro



Article no.	On request
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## ↗ EURO RTM 250-900 – the all-rounder

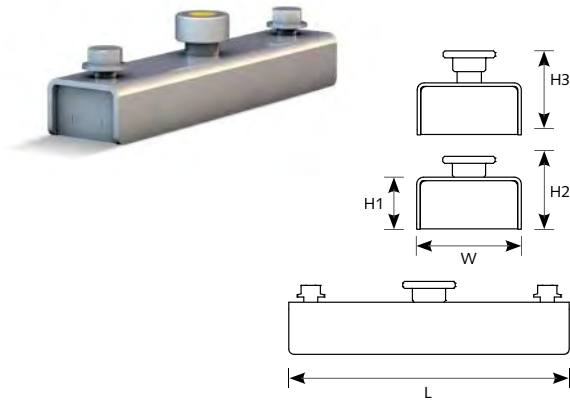


	EURO RTM 250-900	Aluminium EURO RTM 250-900*
Article no.	00202	25513
L (mm)	250	250
W1 (mm)	54-0.2	54-0.2
W2 (mm)	45-0.2	45-0.2
H (mm)	35-0.2	35-0.2
Weight (kg)	2.2	2.2
Retaining force (kg)	900	900

\*With integrated Pro Magnet 900.

## ➤ SPB Standard Pro Magnetic Box 900

The basis for all applications in shuttering construction.



Article no.	03255
L (mm)	280
W (mm)	60
H1 casing (mm)	40
H2 switched (mm)	69
H3 released (mm)	79
Retaining force (kg)	900

## ➤ Wood tensioner with clamping adapter suitable for SPB 900

For safe holding down of shuttering profiles of all types.



	Hold-down rod	Wood tensioner
Article no.	04399	04400
For	SPB 900	all
L (mm)	365	180

Other heights are available upon request.

# Recess solutions

*Whether standard or tailor-made, for manual handling or robot operation, wood or steel - we have just the right solution for your window, door or other recesses.*

From clamping adapters through solutions with integrated magnets to fully robot-compatible systems - we have the right solution for your recess!

Integrated magnet components

Special corner solutions for break-free demoulding

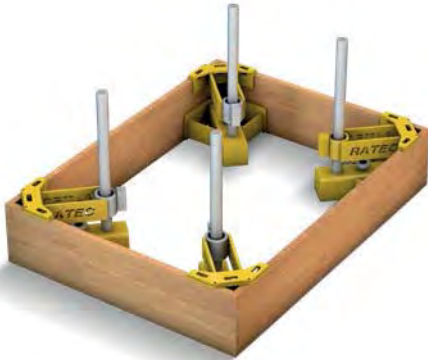
- Custom-made products are possible.
- Simply ask us about it.



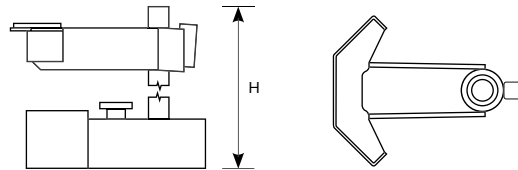
# Variants

## ➤ Speedy adapter for wood recesses

Speedy H for holding down wooden recesses on the pallet.

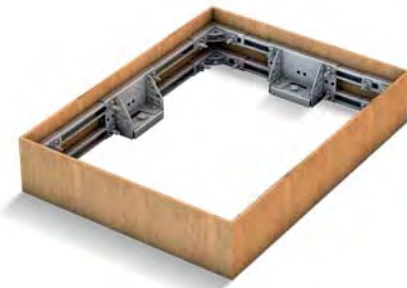


Article no.	03118
H (mm)	Steplessly flexible up to 400



## ➤ PSV Pro System Vario for wood recesses

The sides of the recess are securely held in place with C-profiles via the PSV shuttering system. The PSV corner angle provides a reliable 90° angle in the corners.



Article no.	On request
H (mm)	According to the selection of PSV adapters

The plywood can protrude up to 100mm at the top. **Accessories:** SPB, PSV, PSV corner angle

## ➤ RATEC wooden corner for break-free demoulding of recesses

The special corner angle is used for cladding with wood. After concreting, the corner can be loosened and the legs of the corner can be easily demoulded upwards. The wood-clad corner remains in the element and can be removed at the end. It is combinable with all wood-clad shuttering solutions. The wood must be mitred.



Article no.	On request
H (mm)	80, 100, 150, 200

The plywood can protrude up to 100mm at the top. Other heights on request. If the height exceeds 300mm, two window corners can be used on top of each other.

## ➤ Crane-ready steel windows for holding SPB

Massive steel windows as a welded construction with holders for crane handling, as well as holders for the SPB Standard Magnetic Box for fixing the windows on the pallet.



### Highlights

- Welded steel construction
- Slightly conical for easy demoulding

Article no.	On request
Dimensions	On customer request

Accessories: SPB 2100

## ➤ System shuttering for windows/doors on SAS basis

The sides of the recess are first positioned and then completed with a corner magnet. For stripping, first the corner is removed and then the sides. The corner magnet can be combined with robot- or crane-capable steel shuttering as well as with wood-clad shuttering. The leg shuttering can be set by robot. The corner magnet is set and released manually.

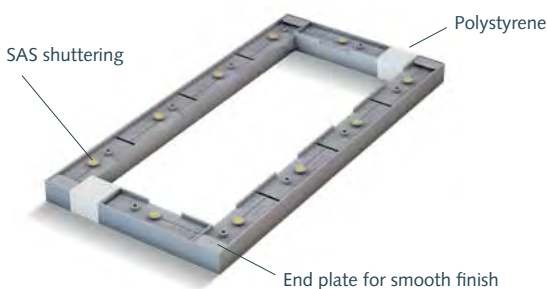


Article no.	On request
H (mm)	100–400

Accessories: SAS corner magnet, SAS shuttering for the legs (or plywood shuttering)

## ➤ SAS system windows

Robot-capable system window on SAS basis, consisting of SAS shuttering in unit length of 450mm. These are set manually or by robot. Intermediate pieces that are shorter than the 450mm grid are lined with polystyrene. The end pieces of the shuttering are closed with a cover plate to guarantee clean edges.



Article no.	On request
L (mm)	450

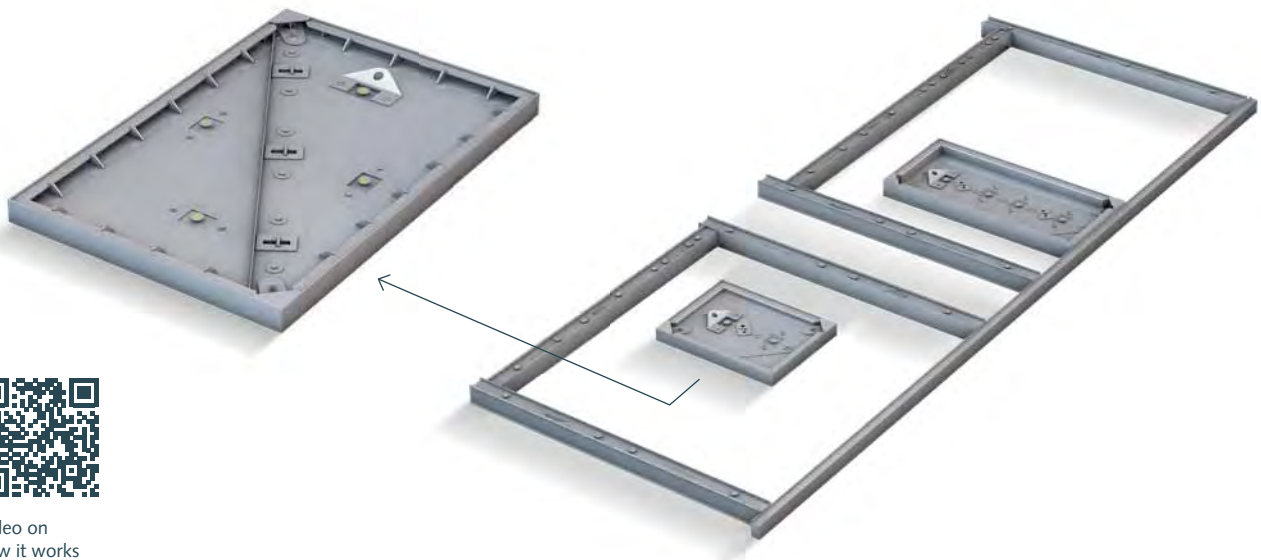
Other lengths on request; polystyrene must be set manually.

## ➤ Shrinkable door and window solution

**NEW**

Innovative solution for the efficient shuttering of recesses in large quantities, particularly suitable for standard window sizes.

The steel frame is made in the dimensions requested by the customer and consists of two halves. For stripping, the conical corners are pulled out upwards. The two halves of the window can then be mechanically shrunk into one another and removed. This allows a break-free demoulding. The shuttering and stripping process is significantly accelerated. Suitable for both vertical (battery moulds or room module moulds) and horizontal production.



Video on  
how it works

Scan QR code!

# 04

## ACCESSORIES AND ADDITIONAL PRODUCTS

*Supplementary components for our  
shuttering programme*

Everything you need to round out the RATEC magnetic shuttering product range: Lifting beams for handling and supplementary components for fixing shuttering formworks or upstands. This is also where you will find our extensive programme of magnetic strips and built-in parts. Do you need a special solution? Contact us – we are up for any challenge!



**LIFTING BEAMS**

Page **102**

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**ADAPTER**

Page **104**

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**MAGNETIC TRAPEZOIDAL AND  
TRIANGULAR CHAMFER STRIPS**

Page **110**

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**INSERT MAGNETS FOR MOUNTING AND ASSEMBLY**

Page **116**

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**ELECTRICAL BOX MAGNETS**

Page **126**

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**QUICKY**

Page **130**

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# Lifting beams

## For efficient handling of shuttering

In addition to the various possibilities of using robots, we also offer different lifting beams for demoulding and easy handling, both for use with RATEC shuttering within and outside the centre of gravity.

Our lifting beams are tailored to our shuttering by means of intelligent attachment solutions, allowing for safe and straightforward handling in the plant.



# Products

## ➤ Plug lifting beam



Article no.	On request
For	SAS
Crossbeam receptacle	Keyholes
Max. load capacity	300 kg
Unladen weight	40 kg

## ➤ Fork lifting beam



Article no.	On request
For	SAS-MF
Crossbeam receptacle	Horizontal attachment lugs
Max. load capacity	400 kg
Unladen weight	171 kg

## ➤ Hook lifting beam



Article no.	On request
For	SAS, Easy Form
Crossbeam receptacle	Gripping knobs (knob distance fixed)
Max. load capacity	300 kg
Unladen weight	21 kg

## ➤ Lifting beams for handling



Article no.	On request
For	SAS, Easy Form
Crossbeam receptacle	Gripping knobs (lifting beam suitable for different knob distances)
Max. load capacity	300 kg
Unladen weight	97 kg

## Adapter

# Always on the safe side with the flexible all-rounders

The quick and economical shuttering adapters from RATEC allow for efficient and safe fixing of shuttering elements. Our adapters have integrated Pro Magnets and can be ideally combined as an addition to any shuttering system, e.g. for recesses, additional upstands at any angle or for fixing inserts. Find out for yourself what our multi-talents can really do. We would also be happy to develop individual adapter solutions for you.

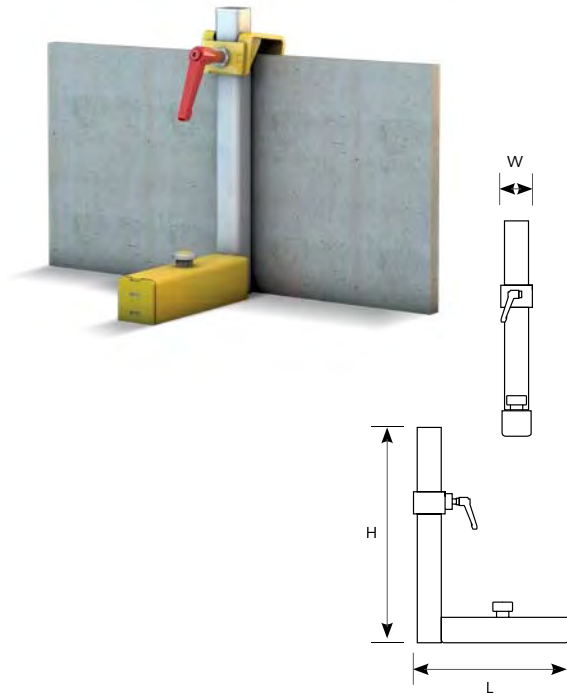




# Products

## ➤ Speedy GFS

For stepless, rectangular fixing of a shuttering skin up to 400 mm in height. The Speedy GFS is suitable for almost all shuttering materials, e.g. bre concrete upstands, wood and many others.



### The advantages

- Quick fastening with a clamp lever
- Space-saving – can be positioned transversely and longitudinally to the shuttering
- Easy positioning and removal by push-button activation of the integrated high-performance magnet
- Clamping clip for secure fixing of the shuttering skin

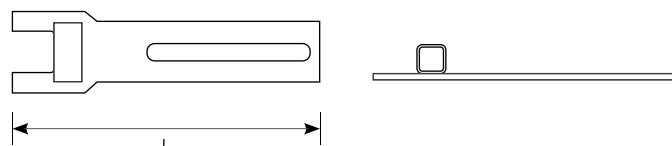
Article no.	48029
L (mm)	264
W (mm)	60 / 40
H (mm)	400
Retaining force (kg)	900
Clamping range (mm)	0 – 30

## ➤ Extension plate for Speedy GFS

The extension plate is used to facilitate the positioning of insert parts, among other things.



Article no.	46192	48262
L (mm)	300	400



### ➤ Head for Speedy GFS, clamping range 30–80 mm

Separate head for use with formwork elements with a thickness of 30–80 mm.



Article no.	50670
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### ➤ Head for Speedy GFS with extension arm

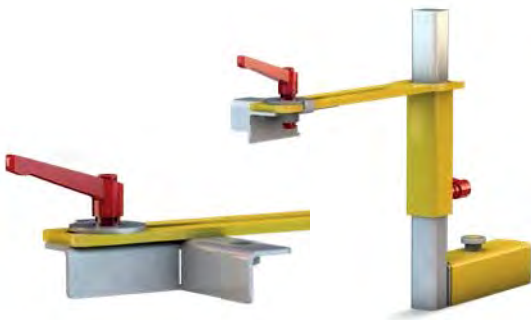
The separate head with extension plate is used for easy positioning of insert parts, for example.



Article no.	50400
L (mm)	300

### ➤ Positioning angle for Speedy GFS

Angle for attachment to the extension for Speedy GFS.



Article no.	48248	48249
Type	Single	Double angle

## ➤ Head for Speedy GFS for plywood shuttering

For holding down shuttering profiles made of wood.

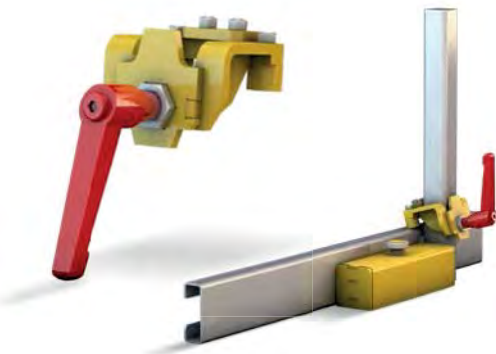


Article no.

65066

## ➤ Universal clamping adapter head for Speedy GFS

For holding down the most varied shuttering profiles of all materials.



Article no.

67761

## ➤ Speedy H

For stepless mounting of Betoplan, Doka or wood. The shuttering can be set straight, at right angles or at an angle of 135°.



Article no.

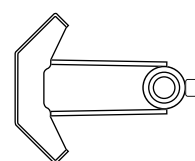
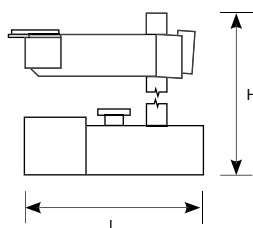
03118

H (mm)

Up to 400

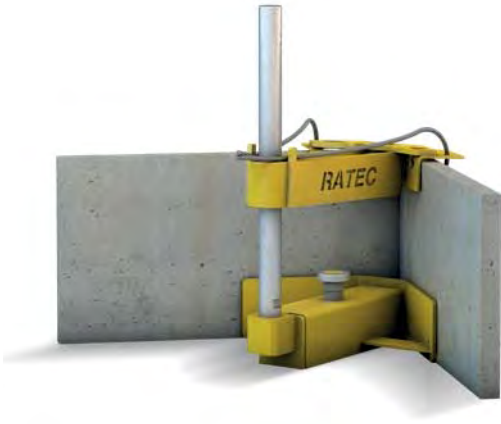
L (mm)

224

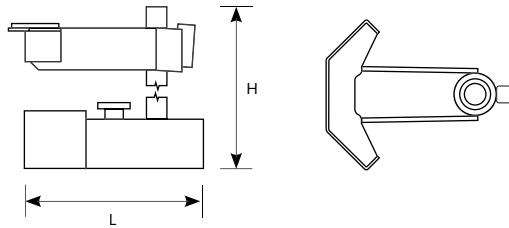


## ➤ Speedy GF

For stepless, right-angled mounting of fibreglass upstands, shuttering board, demoulding and demoulding elements ASE.



Article no.	02858
H (mm)	Up to 400
L (mm)	224



## ➤ UAR adapter

The all-rounder for upstands and special elements as a supplement for all RATEC shuttering systems. The adapter is flexibly adjustable in height and can be used for the attachment of steel, wood, hob-blade inserts and various other things.



Article no.	On request
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UAR adapter with SAS



UAR adapter for angled upstands

# Accessories

## ➤ Speedy lifting tool



<b>Article no.</b>	<b>02860</b>
For	Speedy H, Speedy GF, Speedy GFS

# Magnetic trapezoidal and triangular chamfer strips for clean chamfers and joints

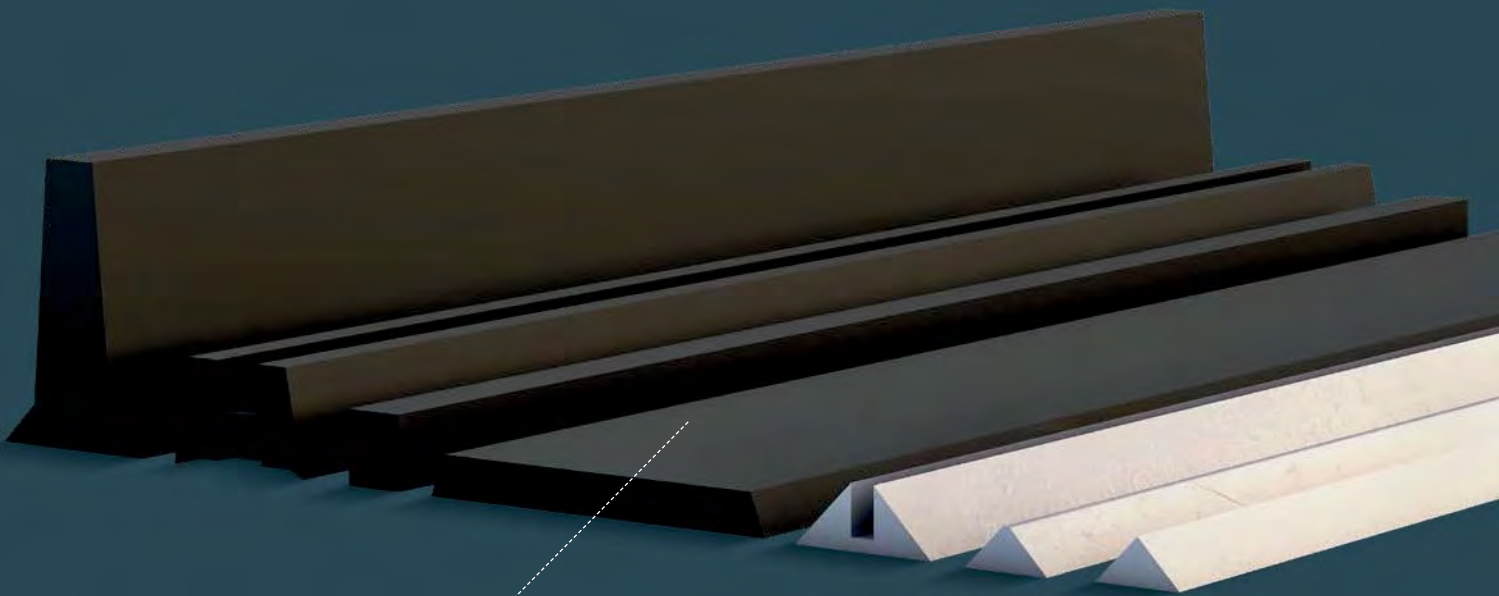
RATEC magnetic strips for the quick and clean formation of chamfers, drip moulds or dummy joints. Our strips are made of high-quality steel (partly covered with rubber) with integrated magnets. This means that screwing or welding on the table or on the formwork can be omitted.

## ESPECIALLY SUITABLE FOR

Attachment to steel shuttering skins and steel tables.

## DETAILED PROPERTIES

- Large variety of shapes for a wide variety of applications
- Profiles with magnetic cores for fastening to steel shuttering formworks
- Reusable, high retaining force, replaced polystyrene mouldings (environmentally friendly)
- Versions in solid steel, steel with rubber coating and solid rubber (flexible)
- Special solutions on request



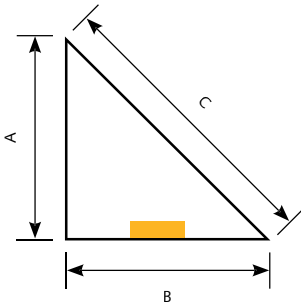
Large variety of shapes

- Special requests, dimensions and lengths can be accommodated.
- Simply ask us about it.

# Magnetic chamfer strips

## ➤ Magnetic chamfer strips made of rubber (with steel core) – magnetised on one side

Standard lengths: 2000 mm and 3000 mm

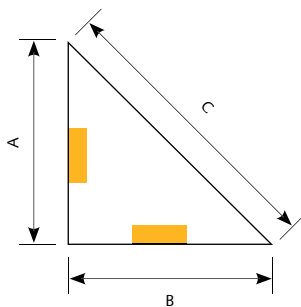


Excerpt from our range of products:

Article no.	Dimensions A x B x C (mm)	Magnetised
02123	15 x 15 x 21	50%
03205	20 x 20 x 28	50%
02126	15 x 15 x 21	100%
03206	20 x 20 x 28	100%
06440	25 x 25 x 35	100%
04372	30 x 30 x 45	100%

## ➤ Magnetic chamfer strips made of rubber (with steel core) – magnetised on both sides

Standard lengths: 2000 mm and 3000 mm



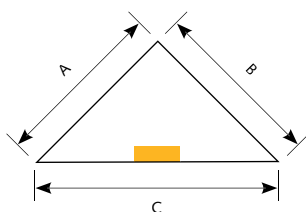
Excerpt from our range of products:

Article no.	Dimensions A x B x C (mm)	Magnetised
03207	20 x 20 x 28	50%
05463	50 x 50 x 71	50%
03208	20 x 20 x 28	100%
11645	25 x 25 x 35	100%
10777	30 x 30 x 45	100%

Other dimensions and lengths are available upon request.

## ➤ Magnetic chamfer strips made of rubber (with steel core) – magnetised on the bottom

Standard lengths: 2000 mm and 3000 mm

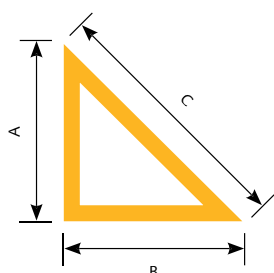


Article no.	Dimensions AxBxC (mm)	Magnetised
03209	20x20x28	50%
05266	25x25x35	50%
03210	20x20x28	100%
06857	25x25x35	100%
10172	30x30x42	100%

## ➤ Magnetic chamfer strips made of solid rubber (flexible)

Standard lengths: 2000 mm

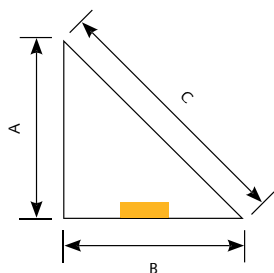
Bending radius: min. 500 mm, Art. 11442 min. 300 mm



Article no.	Dimensions AxBxC (mm)	Magnetised	Min.bending radius
11442	10x10x15	Single side 2-pin	300
11957	15x15x21	Single side 2-pin	500
02155	20x20x28	Single side 2-pin	500
19855	20x20x28	on bottom 2-pole	500

## ➤ Magnetic chamfer strips made of steel – magnetised on one side

Standard lengths: 2000 mm and 3000 mm



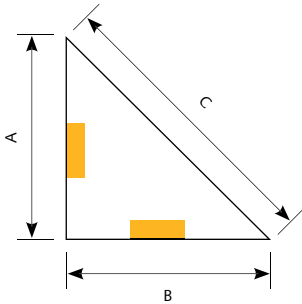
Article no.	Dimensions AxBxC (mm)	Magnetised
03119	10x10x14	50%
03035	15x15x21	50%
03102	10x10x14	100%
02901	15x15x21	100%
05341	20x20x28	100%
02075	25x25x35	100%

Other dimensions and lengths are available upon request.



## ➤ Magnetic chamfer strips made of steel – magnetised on both sides

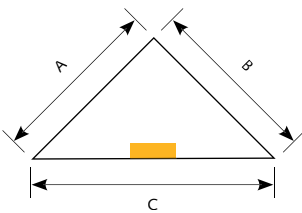
Standard lengths: 2000 mm and 3000 mm



Article no.	Dimensions A x B x C (mm)	Magnetised
02547	10 x 10 x 14	50%
03141	15 x 15 x 21	50%
03138	10 x 10 x 14	100%
03142	15 x 15 x 21	100%
05343	20 x 20 x 28	100%

## ➤ Magnetic chamfer strips made of steel – magnetised on the bottom

Standard lengths: 2000 mm and 3000 mm



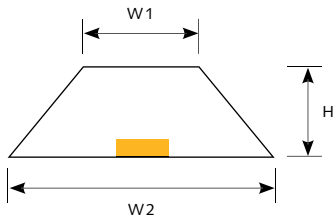
Article no.	Dimensions A x B x C (mm)	Magnetised
03139	10 x 10 x 12	50%
04143	10 x 10 x 14	50%
03143	15 x 15 x 21	50%
05344	20 x 20 x 28	50%
03140	10 x 10 x 12	100%
04142	10 x 10 x 14	100%
03144	15 x 15 x 21	100%
00109	20 x 20 x 28	100%

Other dimensions and lengths are available upon request.

# Magnetic trapezoidal strips

## ➤ Trapezoid magnetic strip made of rubber

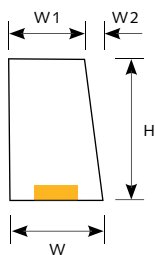
Standard lengths: 2000 mm and 3000 mm



Article no.	Dimensions H x W1 x W2 (mm)	Article no.	Dimensions H x W1 x W2 (mm)
10700	8 x 32 x 37	12175	20 x 22 x 50
07491	8 x 18 x 20	10318	20 x 20 x 60
00437	10 x 20 x 40	11684	20 x 18 x 24
10317	10 x 16 x 36	06951	20 x 16 x 26
05910	10 x 15 x 20	00663	24 x 20 x 19
00836	10 x 10 x 30	11953	30 x 80 x 90
06565	12 x 16 x 40	06344	30 x 70 x 80
10887	15 x 40 x 60	05898	30 x 16 x 36
12071	15 x 20 x 50	07052	30 x 10 x 20
00702	15 x 20 x 40	10307	30 x 10 x 15
10383	20 x 8 x 18	08610	35 x 20 x 80
06395	20 x 50 x 30	27098	10 x 16 x 22
03277	20 x 30 x 40	03733	10 x 10 x 15

## ➤ Trapezoidal magnetic strips made of rubber, on-sided slant

Standard lengths: 2000 mm and 3000 mm

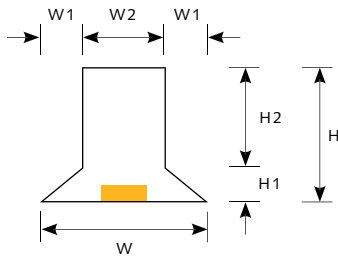


Article no.	Dimensions H x W1 x W2 x W (mm)	Magnetised
08420	10 x 50 x 10 x 60	100 %
12172	10 x 35 x 10 x 45	100 %
11517	10 x 20 x 10 x 30	100 %

Other dimensions and lengths are available upon request.

## ➤ Trapezoidal magnetic strips made of rubber, straight with chamfer

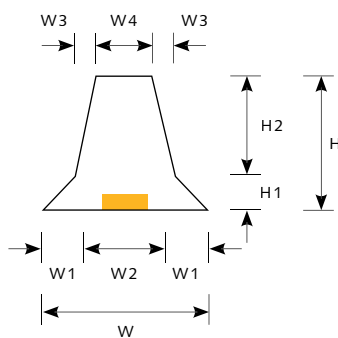
Standard lengths: 2000 mm and 3000 mm



Article no.	Dimensions H x H1 x H2 x W x W2 x W1 (mm)
10057	70 x 10 x 60 x 45 x 25 x 10
07855	30 x 10 x 20 x 60 x 40 x 10
07433	65 x 10 x 55 x 38 x 18 x 10
07434	80 x 10 x 70 x 38 x 18 x 10
07465	100 x 10 x 90 x 40 x 20 x 10
07234	15 x 10 x 5 x 40 x 20 x 10

## ➤ Trapezoidal magnetic strips made of rubber, slanted with chamfer

Standard lengths: 2000 mm and 3000 mm



Article no.	Dimensions H x H1 x H2 x W x W1 x W2 x W3 x W4 (mm)
03580	70 x 10 x 60 x 38 x 10 x 18 x 4 x 10
08245	70 x 10 x 60 x 40 x 10 x 20 x 2,5 x 15
09034	80 x 10 x 70 x 40 x 10 x 20 x 2,5 x 15

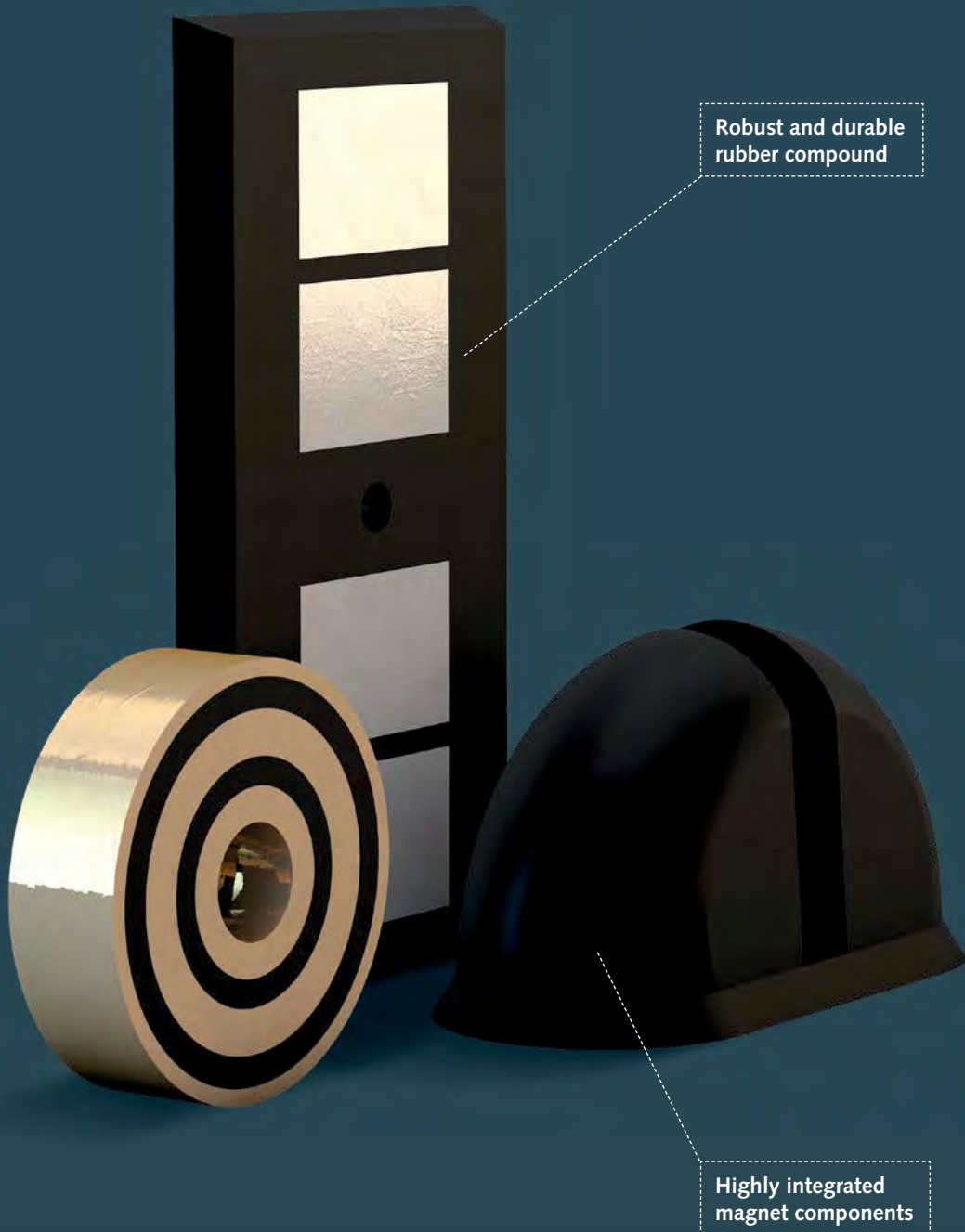
## ➤ We will gladly produce special solutions for you on request!



This is an excerpt from our chamfer and trapezoidal strip range of products. Additional designs, special dimensions and lengths are available on request.

# Insert Magnets for Mounting and Assembly

Insert magnets for mounting and assembly from RATEC have been used for years in the precast concrete industry. They have proven themselves in tough everyday conditions. And through the combination of rubber bodies with integrated magnets, they can be produced in almost any geometry. Simple solutions make efficient work possible. The strong, integrated magnet fixes the insert part in the exact position.



- Custom-made solutions are possible.
- Simply ask us about it.

## APPLICATION

For fixing threaded bushes, anchor plates, anchor channels, pipes, loop boxes and lift off anchors of all common manufacturers.

## ESPECIALLY SUITABLE FOR

All types of concrete products

## DETAILED PROPERTIES

- Very high retaining force
- Can be used directly in concrete
- Simple and safe positioning of inserts without slipping
- Simple, break-free stripping

# Application examples



Magnetic holder for corrugated pipe



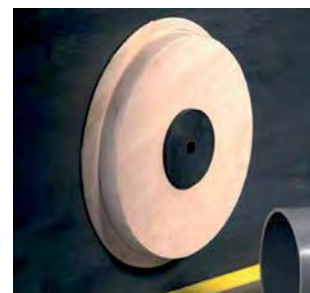
Pipe magnet



Threaded bushing magnets



Anchor plate with magnetic holder



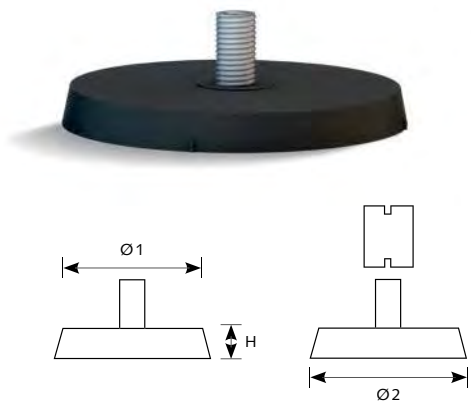
Universal magnet with plastic plate

# Threaded bushing magnets

All our threaded bushing magnets are available with metric, round and KO threads.

## ➤ Steel thread G (rubber)

With hex socket M8 (Allen M6 on request) for mounting of steel thread support M12 - M36.

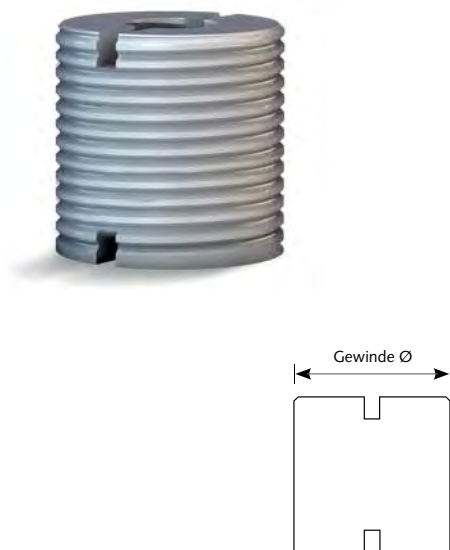


Excerpt from our range of products:

Article no.	Ø 1 (mm)	Ø 2 (mm)	H (mm)
06739	46	50	10
00898	50	60	10
05434	54	58	12
04836	57	69	23
06616	64	69	10
05422	64	69	12

## ➤ Steel thread support (accessory for steel thread)

With internal thread M8 for steel thread.



Excerpt from our range of products:

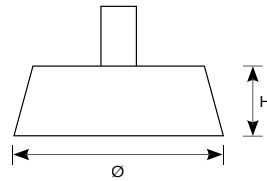
Article no.	Thread Ø
04835*	M10
04837	M12
04838	M14
04839	M16
04840	M18
04841	M20
04842	M24
04843	M30
06588	M32
05097	M36

\*Steel thread with Allen M6 required.

This is an excerpt from our threaded bushing magnet product range. Additional designs are available on request.

## ➤ Threaded bushing magnet G (rubber)

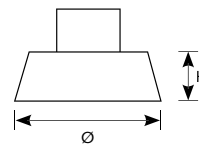
Hexagon socket screw with threaded attachment firmly welded, the threaded attachment is freely rotating. Round system, conical



Article no.	On request	On request	On request	On request	On request
Thread	M8–M36	M8–M36	M8–M36	M8–M36	M8–M36
Ø (mm)	60	69	42	69	69
H (mm)	10	10	12	12	23

## ➤ Threaded bushing magnet S (steel)

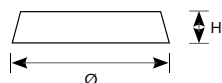
Hexagon socket screw with threaded attachment firmly welded, the threaded attachment is freely rotating. Round system, conical



Article no.	On request	On request	On request	On request
Thread	M10–M36	M10–M36	M10–M36	M10–M36
Ø (mm)	55	70	85	105
H (mm)	15	15	15	15
Retaining force (kg)	105	190	290	450

## ➤ Threaded bushing magnet G (rubber) internal thread

With various internal threads, round system, conical.



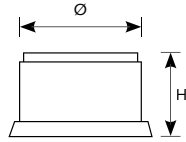
Article no.	On request
Thread	M5–M16
Ø (mm)	Variable
H (mm)	Variable
Retaining force (kg)	Depending

This is an excerpt from our threaded bushing magnet product range. Additional designs are available on request.

# Pipe magnets

## ➤ Magnets for corrugated pipe G (rubber)

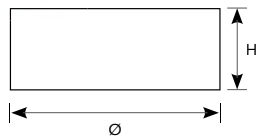
Pipe magnet for fixing pipes.



Article no.	Ø (mm)	H (mm)
12528	27	30
12444	37	70
06757	50	62
02096	50	64
12453	54	48
02097	65	57
07085	69	64
01979	80	62
11846	100	68
12529	150	105

## ➤ Pipe magnet G (rubber)

Pipe magnet for fixing pipes in supports, binders, special beams.



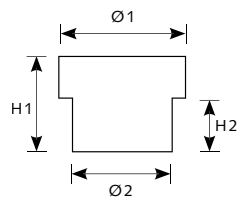
Article no.	Ø (mm)	H (mm)	Retaining force (kg)
06879	50	15	120
07710	70	27	200
03258	100	27	350
00236	114	27	700

This is an excerpt from our pipe magnet product range. Additional designs are available on request.



## ➤ Universal magnet G (rubber)

Universal magnet for recesses and dummy tubes.



Article no.	Ø1 (mm)	Ø2 (mm)	H1 (mm)	H2 (mm)
00394	45	35	34	19
00386	70	55	29	19

## ➤ Plastic plate for universal magnets

Special dimensions for the plastic plates are available.



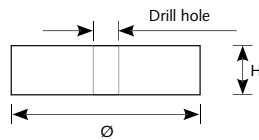
Article no.	Thread Ø
12523	75
07096	103
07095	119
07097	152
07995	200

This is an excerpt from our pipe magnet product range. Additional designs are available on request.

# Mounting magnet system

## ➤ Round magnet series type R/Z

Round magnet for installation in recyclable recess bodies.  
 Features: Sealed adhesive side and high retaining force.



	Type R/ Z-105	Type R/ Z-150	Type R/ Z-190	Type R/ Z-290	Type R/ Z-450	Type R/ Z-600	Type R/ Z-700
<b>Article no.</b>	<b>20747</b>	<b>20736</b>	<b>20738</b>	<b>20740</b>	<b>20742</b>	<b>20743</b>	<b>20745</b>
Ø (mm)	50	60	65	80	100	115	120
H (mm)	11	15	15	15	15	15	15
Drill hole (mm)	20	16.5	16.5	16.5	16.5	16.5	16.5
Retaining force (kg)	90	150	190	290	450	600	700

## ➤ Magnetic holder for loop box

Magnetic holder for all common steel loop boxes (Peiko, Philipp etc.).

Article no.	On request
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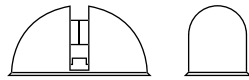


This is an excerpt from our insert magnets product range. Additional designs are available on request.

# Lift off anchor

## ➤ Flat steel lift off anchor (rubber)

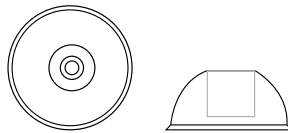
Delivery without lift off anchor



Article no.	75781	75780	02617
Lift off anchor (t)	2.5	5	7.5/8/10

## ➤ Ball head lift off anchor (rubber)

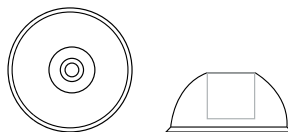
Magnet for fixing a ball-type transport anchor according to the load class.



Article no.	04967	01041	01042	01561	03706
Lift off anchor (t)	1.3	2.5	5	7.5	10

## ➤ Ball head lift off anchor (steel)

Magnet for fixing a ball-type transport anchor according to the load class.



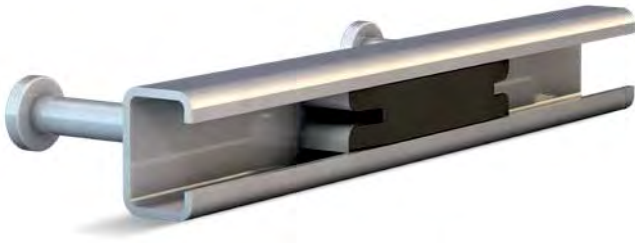
Article no.	20756	20758	20759	20760
Lift off anchor (t)	1.3	2.5	5	7.5/10

This is an excerpt from our insert magnets product range. Additional designs are available on request.

# Anchor channels

## ➤ Anchor channels magnet G (rubber)

For fixing all common anchor channels HTA/HZA, for easy hooking into the channel.



## ➤ Anchor channels magnet S (steel)

For fixing steel anchor channels HTA/HZA, for easy insertion into the channel (magnetic top and bottom).



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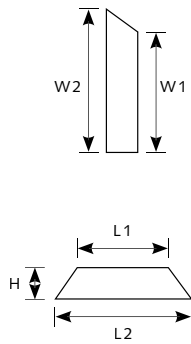
We would be glad to customise an offer for your particular channel.

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# Anchor plates

## ➤ Anchor plate magnet G (rubber)

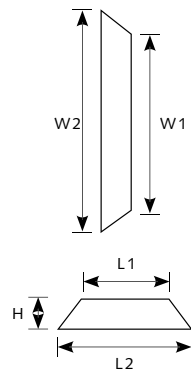
For fastening steel anchor plates.



Article no.	L 1 (mm)	L 2 (mm)	W 1 (mm)	W 2 (mm)	H (mm)
04149	100	170	105	115	35
11914	100	140	100	120	20
12286	100	160	90	120	20
12287	200	240	100	120	80
08401	120	150	90	105	25

## ➤ Anchor plate magnet G (rubber)

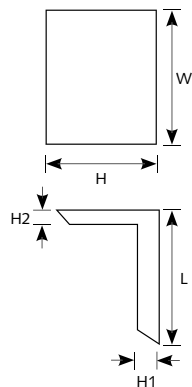
For fastening steel anchor plates.



Article no.	L 1 (mm)	L 2 (mm)	W 1 (mm)	W 2 (mm)	H (mm)
12325	100	120	100	120	20
07483	105	145	100	125	35
08284	120	150	60	90	20
06861	120	160	120	160	20
11915	160	180	120	140	10

## ➤ Magnet holder edge S (steel)

For fastening steel anchor plates.



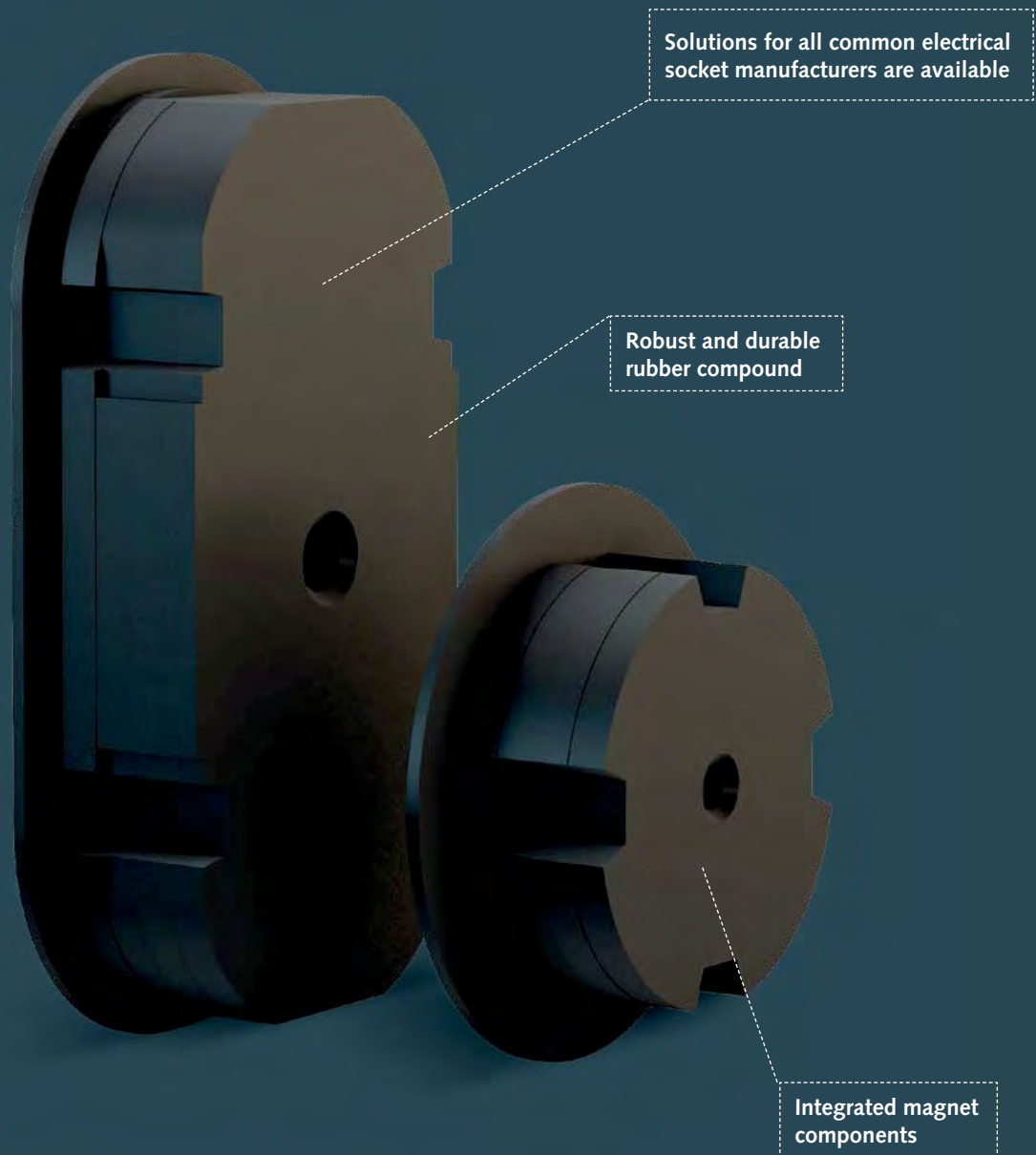
Article no.	L (mm)	W (mm)	H (mm)	H 1 (mm)	H 2 (mm)
12448	270	150	155	15	15
11936	115	50	155	10	10
00838	150	160	195	30	20
00837	80	140	195	10	20

This is an excerpt from our insert magnets product range. Additional designs are available on request.

# Electrical Box Magnets

## To make sure the current is in the right place!

Electrical box magnets from RATEC have been used for many years in the precast concrete industry and have proven their worth in practice. Through the combination of rubber bodies with integrated magnets, almost all geometries and solutions can be realised. Easy installation and removal in the electrical boxes facilitates an efficient and streamlined process. The strong, integrated magnet fixes the insert part in the exact position. With empty conduit magnets, the magnet body leaves a recess in the concrete after removal.



- Custom-made solutions are possible.
- Simply ask us about it.

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## APPLICATION

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For attachment of electrical boxes of all common manufacturers.

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## ESPECIALLY SUITABLE FOR

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Our product range features a wide variety of insert magnets. We also gladly offer customised solutions for you! Please send us your requirements, drawing or type. We will surely have the right solution for you.

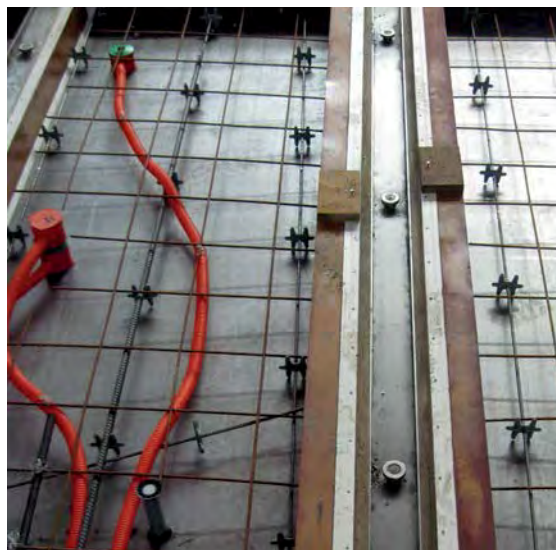
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## DETAILED PROPERTIES

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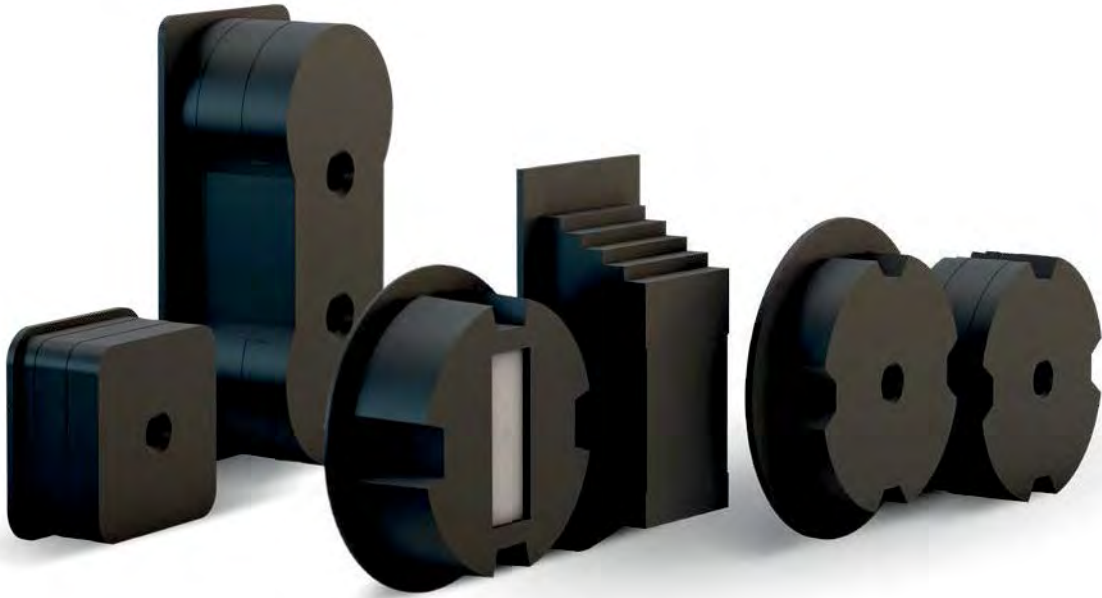
- Very high retaining force
- Can be used directly in concrete
- Simple and safe positioning of inserts without slipping

# Application examples



# Product

## ➤ Magnets



We offer the right magnet solutions for your electrical boxes from the following manufacturers:

ABB

FUGA

PRIMO

AGRO

KAISER

Opus

ATTEMA

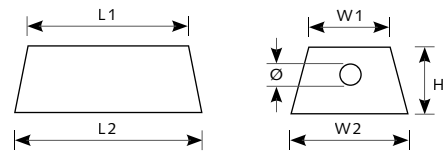
SPELSBERG

Further customised solutions for your electrical boxes are available!



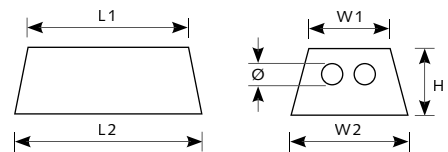
# Accessories for empty conduit attachment

## ➤ Empty conduit end attachment single 1-H



Article no.	27285
L 1 (mm)	85
L 2 (mm)	100
W 1 (mm)	40
W 2 (mm)	70
H (mm)	40
Ø (mm)	19

## ➤ Empty conduit end attachment double 2-H



Article no.	03000
L 1 (mm)	115
L 2 (mm)	135
W 1 (mm)	90
W 2 (mm)	120
H (mm)	50
Ø (mm)	22

Further designs are available on request.

# Quicky

## The ultimate precast dowel

Quicky is a compact precast dowel made from a single piece. Assembling and disassembling parts is not required. Quicky is injection-moulded from high-quality branded HDPE plastic and is therefore cheaper than metal-plastic threaded bushes. The threadless sleeve allows the anchoring screw to be turned in and out with an electric screwdriver in seconds. The days of risky unscrewing of threaded parts (breakage!) and cumbersome manual screwing of the anchoring screw into threads that are frequently soiled with cement paste are gone at last!

High-quality branded HDPE plastic "Made in Germany"



Compact precast dowel made from a single piece

# Products

## ➤ Quicky

Tested by the Materials Testing Institute of the University of Karlsruhe.  
For use with wood screws 12x80mm or 12x50mm.



<b>Article no.</b>	<b>01250</b>
Material	Branded plastic HDPE "Made in Germany"
L (mm)	60
Disk Ø (mm)	56
Packaging unit	1100 pcs.

Wood screws and washers are not included in the scope of delivery.

## ➤ Quicky TSI

Quicky TSI is universally usable in double walls, solid parts and double walls with thin fibre concrete shells. For use with wood screws 12x80mm or 12 x 50mm. Tested by the Technical University of Darmstadt, Institute for Concrete Structures (according to the latest European guidelines ETAG 001).



<b>Article no.</b>	<b>05832</b>
Material	Branded plastic HDPE "Made in Germany"
L (mm)	74
Disk Ø (mm)	46
Packaging unit	1700 pcs.

Wood screws and washers are not included in the scope of delivery.

## ➤ Quicky porous concrete

Quicky porous concrete is a compact precast dowel in one piece with three holes Ø = 7 mm for sewing.

**Attention:** When using Quicky porous concrete, a suitability test must be carried out by the plant depending on the quality of the concrete and additives used.



<b>Article no.</b>	<b>02150</b>
Material	Branded plastic HDPE "Made in Germany"
L (mm)	60
Disk Ø (mm)	56
Packaging unit	900 pcs.

Customer-specific suitability test (plant test).

# 05

## 3D MOULDS AND BATTERY SYSTEMS

*The programme for the production of high-quality planar and volumetric elements*

Our 3D moulds programme includes various solutions for the production of volumetric elements, such as room modules, sanitary cells, stairs or transformer stations. Depending on the variant, the room cell mould is suitable for filling from above or in the upcrete® process by pressure filling from below or from the side. In addition, we develop battery systems with up to 20 pockets for pressure filling from below using upcrete® technology to meet your requirements. All solutions are tailor-made for your needs.



**3D MOULD SOLUTIONS**

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Page **134**

**RATEC BATTERY SYSTEM**

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Page **142**

# 3D moulds

## Tailor-made precision

We develop and manufacture special moulds for volumetric precast concrete elements, such as room modules, stairs, balconies, roofs and much more in accordance with your specifications. Together with you, we develop an economic shuttering solution tailored to your needs - customised based on your individual requirements and manufactured with the highest accuracy. We focus on the optimisation of the production process, on high surface quality of the element and highest dimensional accuracy. We also take your specifications into account – our focus is always on finding the most efficient solution in close cooperation with the customer.

Durable due to high quality workmanship

Tailored to customer requirements

Robust and pressure-resistant design



## PROPERTIES

- Solid steel construction, upcrete® capable through optional pressure-resistant construction
- High level of workmanship "Made in Germany"
- Durability due to high quality materials used and precise execution

Our developments are always based on the component drawings and the existing production concept. This is the basis on which we construct the appropriate shuttering(s). In addition, we check the logistical and economic efficiency and then propose an optimal solution to you.

## APPLICATIONS



Room module shuttering



Staircase mould



Roof mould



Special shuttering for track roller boxes

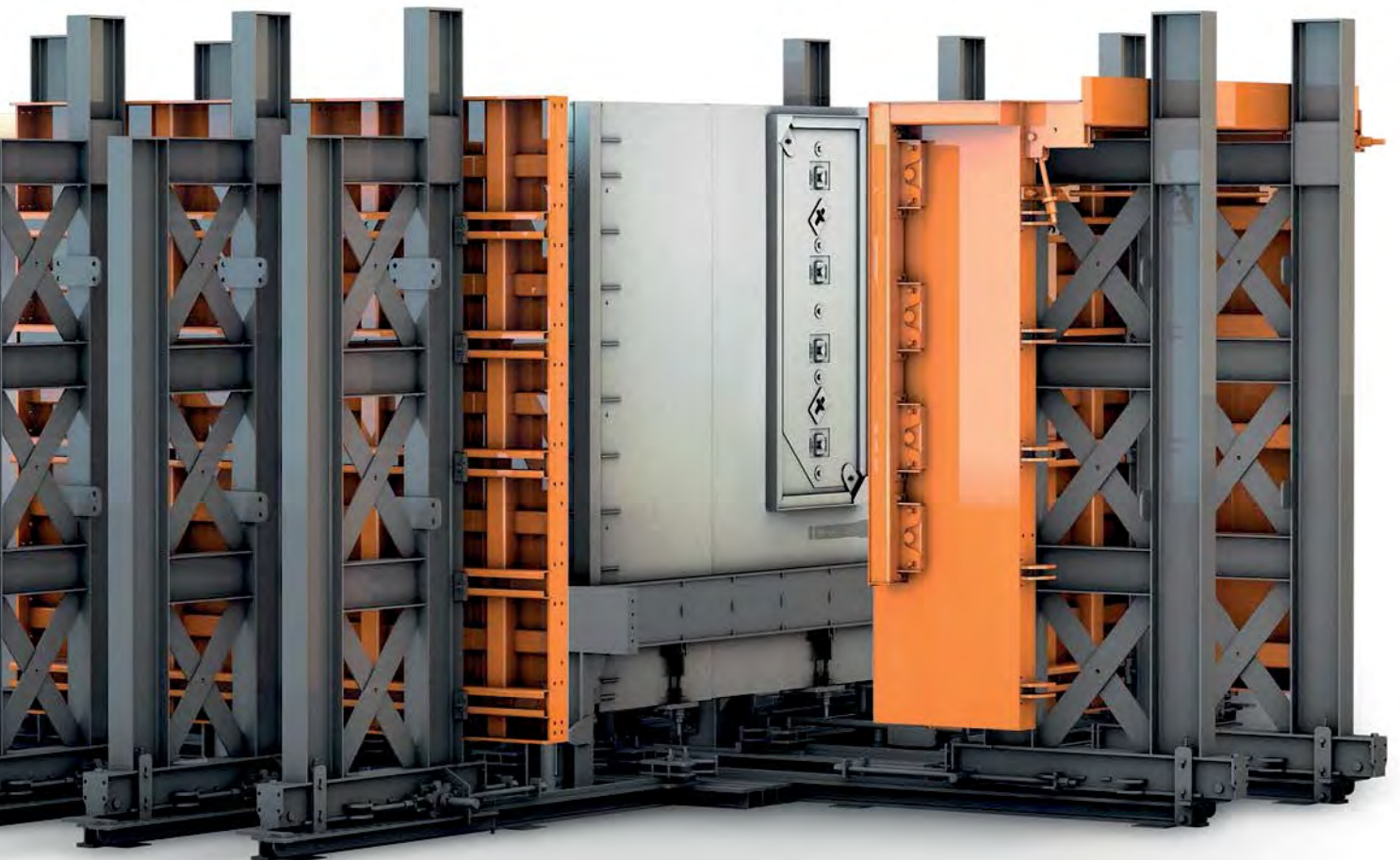
3D moulds for room modules, stairs or other volumetric concrete elements can be developed on request.

## Room modules

# The flexible mould kit

*High quality also for smaller series – our newly developed modular mould kit offers an adequate solution also for smaller projects.*

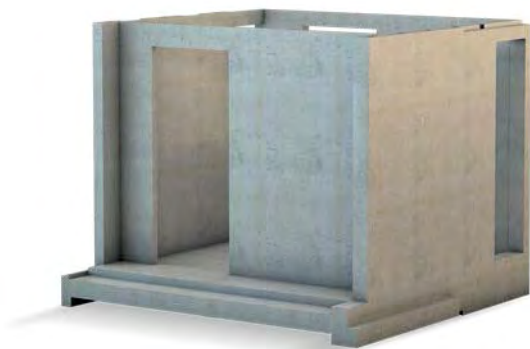
One of the unique features of the new concept is the patent-pending shrinking mechanism, whereby the module is lifted while the inner core is shrunk at the same time. The mould was also deliberately designed to be modular. The core and outer panels consist of various standardised parts that can be easily converted and thus adapted to other room dimensions. This means that the mould can be used in an economically efficient way even when the production volume of a room type is low.



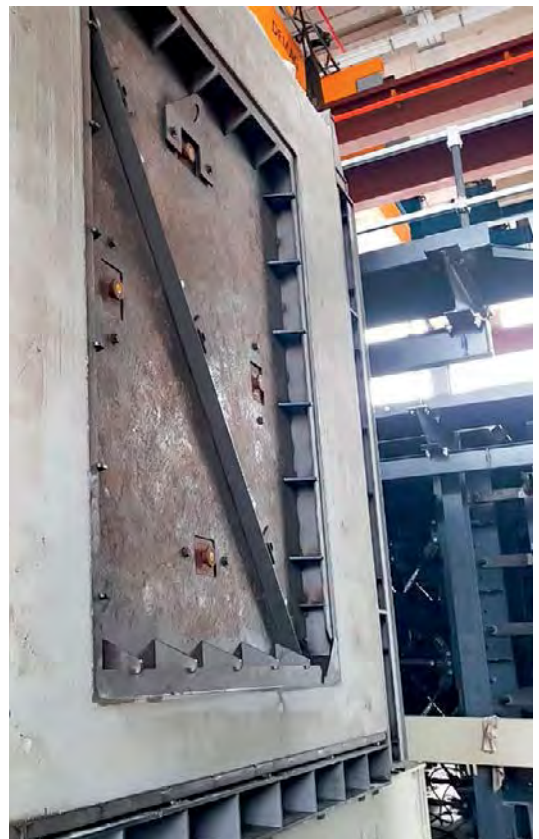


## PROPERTIES

- Core and outer panels are modularly constructed from various standardised base elements that can be recombined as required.
- Patented shrink mechanism of the inner core: simultaneous shrinking and lifting of the element
- Also adaptable to complex details of the element
- Suitable for filling from above and below
- Easy to integrate into existing production system



Example:  
finished room module



Project report  
3D mould kit, Singapore

Press article (PDF)  
Scan QR code

# Transformer substations

## Versatility is key

*Many different shapes are possible with just one mould – notwithstanding easy handling and short changeover times.*

The simplest way to produce a 3D room element is to use a fixed inner core with draft angles. However, this approach is only suitable to elements in which the formation of a wall slope in the element is possible within the scope of the standards and static requirements. Such is the case for the design of garages or the production of transformer stations. For the production of substation elements in particular, we developed a solution that covers common types of stations, is flexible to use, and which can speed up the process in the plant.



## PROPERTIES

- The shuttering is designed for two different lengths. This means that the core and outer panels can be converted for a different length.
- Swappable, customised attachments for the production of interior walls, recesses etc.
- Changing attachments for other station types generally takes less than 20 minutes
- The floor is hydraulically lifted by 10 cm to facilitate stripping
- Integrated vibrator unit used with normal or washed concrete



Example:  
Two different shapes of the possible concrete elements

Example: Shuttering for the production of transformer stations measuring 2.4x2.1x2.3 m and 2.9x2.1x2.3 m



Based on the element programme (in the example 14 different variants), the customer has a total of 23 different attachments at his disposal.



Project report  
3D moulds for transformer substations

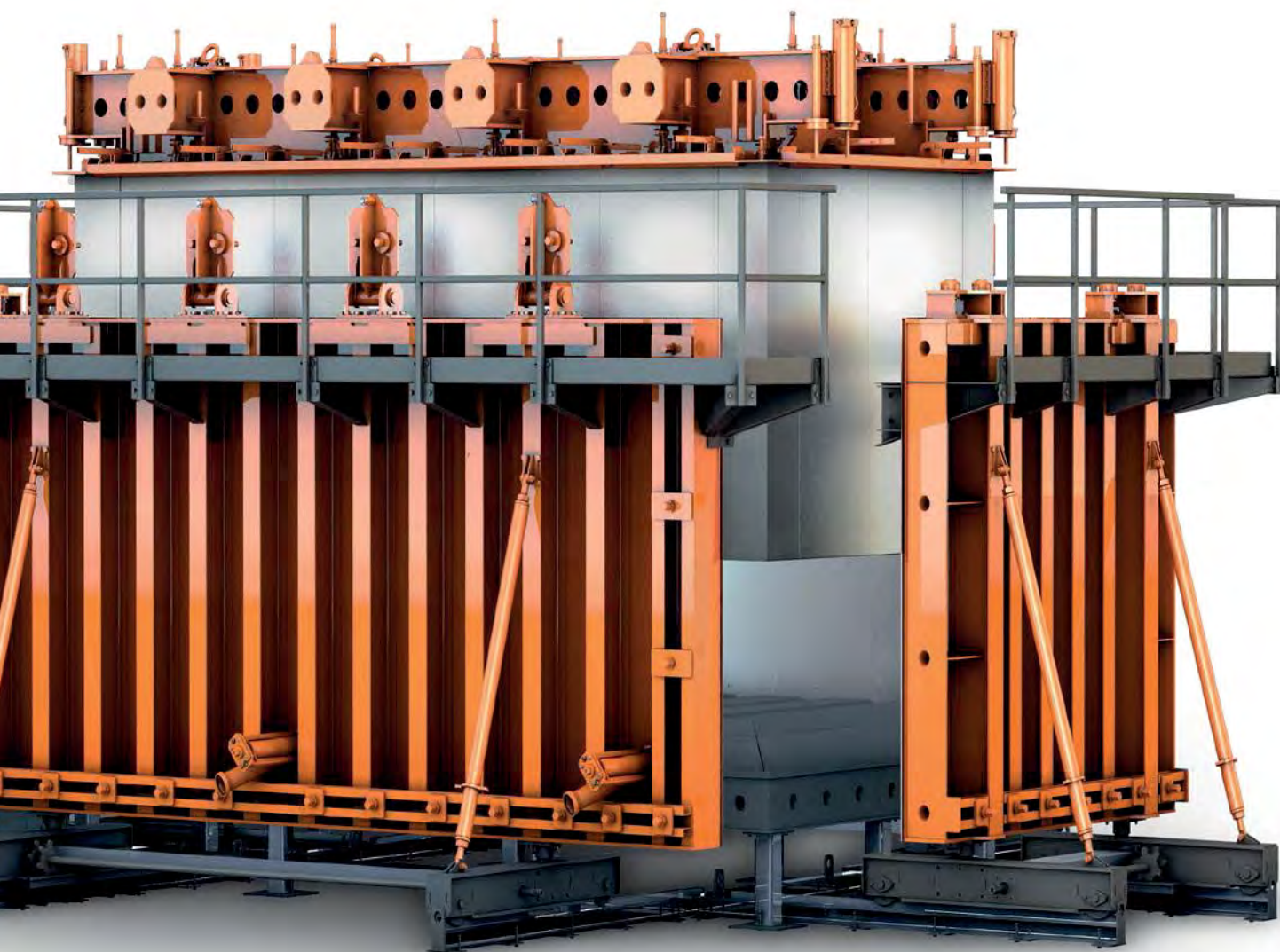
Press article (PDF)  
Scan QR code

# upcrete® room modules

## In-situ production of complex elements

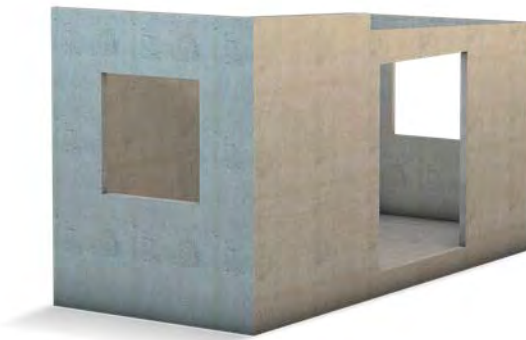
*Visions become reality with upcrete® modular moulds – even complex concrete bodies can be realised with smooth surfaces on all sides.*

The room module mould with “flying” shrinking core was the first room cell mould developed in Hockenheim and was used for a modular housing project for a Peruvian customer. This mould variant is based on the upcrete® technology, in which self-compacting concrete is pumped from below into a closed mould. The process allows an optimal spread of the concrete within the shuttering and smooth surfaces on all sides as well as the exact formation of edges and recesses. Another advantage is that the structure can be produced in its final installation position, which means that subsequent turning is no longer required.



## PROPERTIES

- Maximum dimensional accuracy on the component
- Complete filling of the most difficult geometries
- Production of complex concrete bodies in final installation position
- All-around smooth surfaces
- Minimal concrete residue
- Quiet, material-friendly, efficient and employee-friendly concrete element production
- High utilisation of the mould



Example:  
finished room module



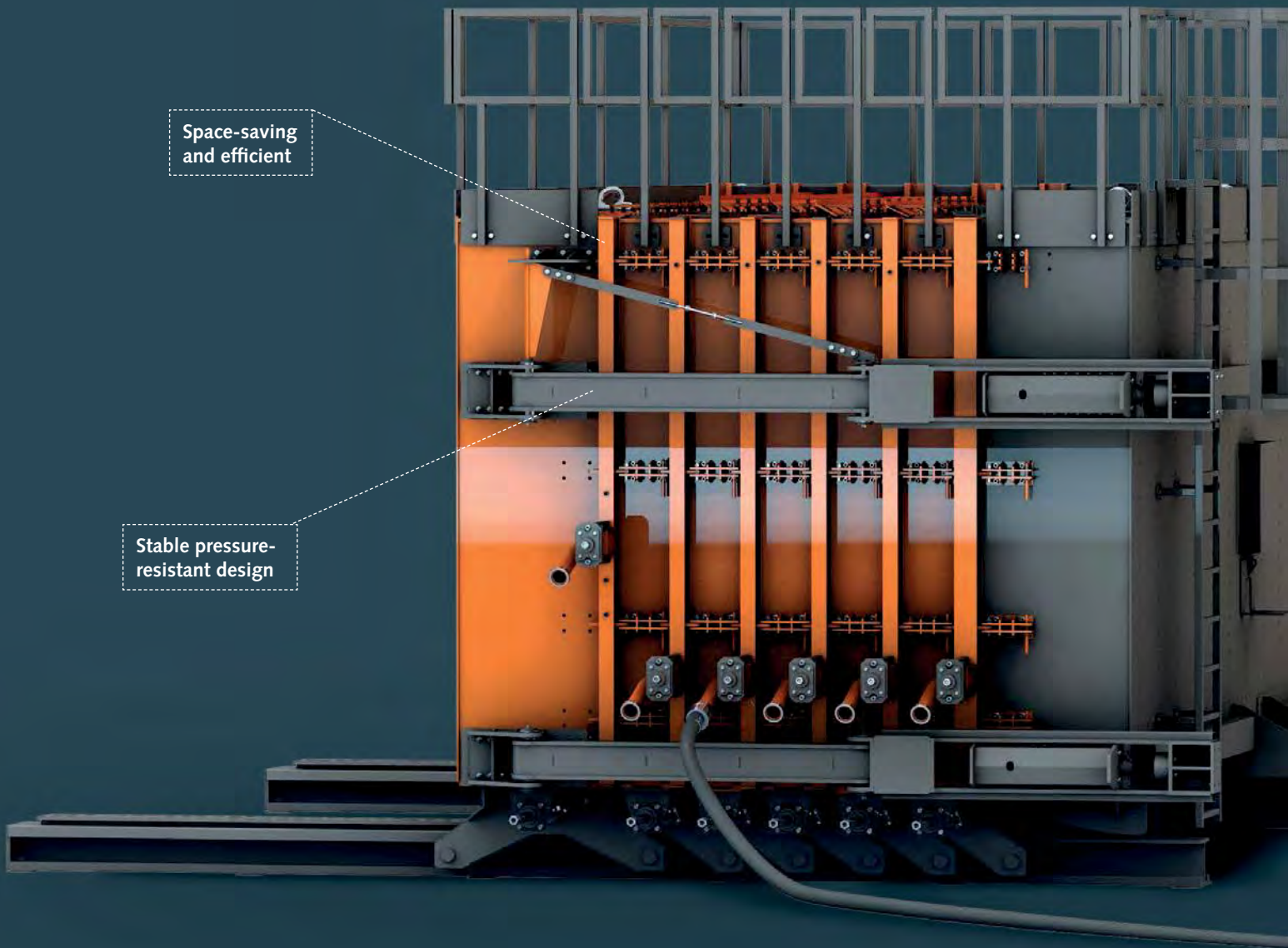
Project report  
Modular housing

Press article (PDF)  
Scan the QR code

# RATEC battery system

*Cost-effective production of complex, smooth and extremely high-quality precast concrete elements.*

The pocket battery moulds from RATEC incorporate all the creativity and engineering know-how of more than 40 years of experience in the development and rationalisation of precast concrete plants. Together with the proven upcrete® technology, our pocket battery moulds prove their high quality and cost-effectiveness day after day across three continents. The end product is characterised by smooth surface concrete on all sides as well as by the smallest geometric tolerances. The shuttering formworks also impress with their ease-of-use and sturdiness.



Space-saving  
and efficient

Stable pressure-  
resistant design

- Custom-made solutions are possible.
- Simply ask us about it.

## PROPERTIES

- Space-saving and efficient
- Stable pressure-resistant construction – each pocket can be completely filled separately
- Can be filled from above with a concrete spreader or by means of the UPP 100 (upcrete® process) from below or from the side
- Walls can be tensioned hydraulically or mechanically
- Available as single or twin battery, expandable to 2 x 10 pockets on request

## APPLICATIONS



Hydraulic battery mould with pump car



Modular side formwork



Highest quality of concrete elements



With UCI Square

# RATEC battery system

## Application examples

The range of previous projects showcases the wide variety of application possibilities and performance of our battery systems. RATEC battery systems have been particularly successful where absolute dimensional accuracy and surface quality are required or where the complexity of an element did not allow any other production option.

The application examples also show that RATEC battery systems can be used in a space-saving and effective manner, both as a stand-alone solution and to supplement an existing production unit.

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### PROJECT USA

## NOISE BARRIERS WITH HIGH SURFACE QUALITY

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Due to contouring of the elements and matrices partially on both sides, the customer decided in favour of the RATEC battery systems.

#### Project scope

A total of three battery moulds were installed:

- Type A: 1 x 10 pockets, size 6 x 1.8 m
- Type A: 1 x 5 pockets, size 6 x 2.4 m
- Type B: 1 x 10 pockets, size 6 x 3.6 m

#### Additional information

- All battery systems are designed as twin systems and can be supplemented with additional pockets.
- An upcrete® pump station UPP 100 is used for filling.
- The production capacity of the plant is 300m<sup>2</sup> or 150 running wall meters per day in single-shift operation.



Noise barriers  
in the USA 2017

Press article (PDF)  
Scan the QR code



## PROJECT INDONESIA VERTICAL PRODUCTION OF FACADE ELEMENTS

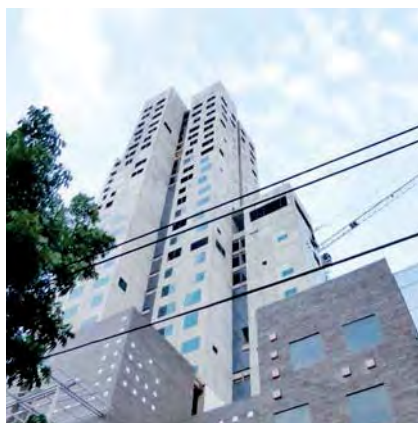
One of the leading Indonesian precast concrete manufacturers relies on the battery system from RATEC in combination with the upcrete® process

### Product scope

- Product: Facade elements for new hotel construction
- Battery moulds with 4 pockets of 9x3.9m each
- UPP 100 pump station

### Unique challenges

- Element size
- Limited production area
- Short construction time
- Highest exposed concrete quality



*New hotel construction in Indonesia*

Press article (PDF)  
Scan QR code



## PROJECT IN ITALY ITALY'S PAVILION AT EXPO 2015 IN MILAN

A majority of the facade elements were manufactured in a RATEC battery mould using the upcrete® process. Filling from top was not logical due to the element geometry.

### Project scope

- 9000 m<sup>2</sup> large facade
- 2200 t cement
- Made from 80 % recycled material

- Battery moulds with 6 pockets of 6x4 m each
- UPP 100 pump station
- UCI filling connections

### Unique challenges

- Very complex elements, each with an individual design
- Reliable shaping of the filigree "branches"



*Country pavilion at the 2015 Expo*

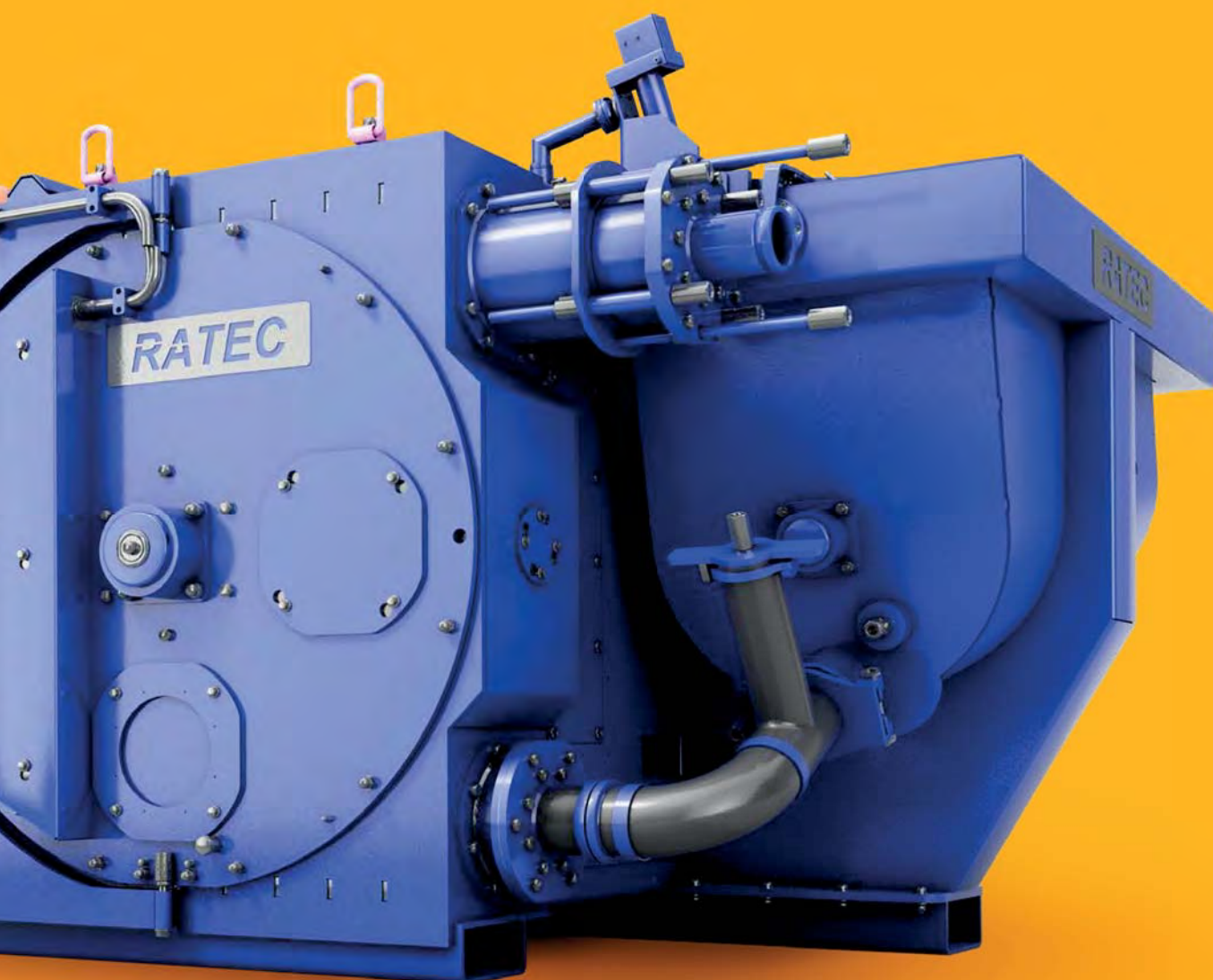
Press article (PDF)  
Scan QR code

# 06

## PUMPS, CONCRETE SPREADER AND ACCESSORIES

*The programme for a concrete supply suitable for precast plant*

RATEC solutions for efficient supply of concrete and smooth shuttering on the element. Our professional products for concrete delivery allow you to fill your shuttering cleanly and completely with little wear on the material.



**UPP PUMP STATION**

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**UCI CONCRETE FILLING CONNECTION**

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**KBV CRANE CONCRETE DISTRIBUTOR**

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# UPP pump station

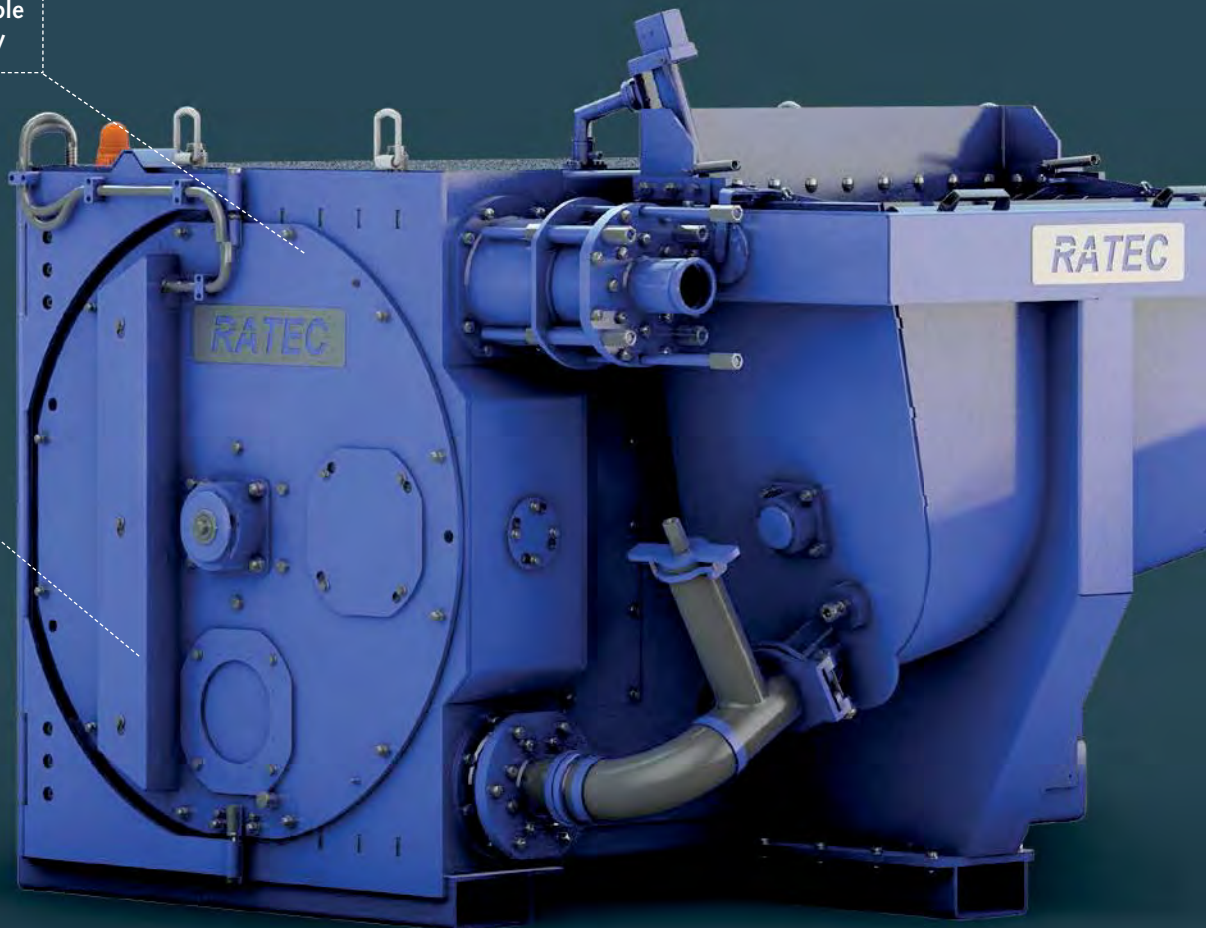
## The compact all-rounder for concrete delivery

The UPP Pump Station is suitable for the realisation of complex, smooth and high quality precast concrete elements. As the core of the upcrete® technology, the UPP opens up possibilities where other filling techniques cannot be used for quality or feasibility reasons.

The most important technical data	UPP 100	UPP 125
Capacity	Up to 22 m <sup>3</sup> /h	Up to 33 m <sup>3</sup> /h
Conveyor hose Ø	100 mm	125 mm
Power input	33 kW / electr.	48 kW / electr.
Connector on housing	CEE 63 A	CEE 125 A

Rotor pump with steplessly adjustable conveying capacity

Easy to clean and low maintenance



Further specifications on request.

## BENEFITS AT A GLANCE

- Easy to clean
- Finely dosed
- Suitable for concrete plants
- Fast interim cleaning
- Continuously adjustable feed from 0–20 m<sup>3</sup>/h
- Including radio remote control
- Software interface for automatic concrete delivery as standard
- Modular pre-hopper from 600–2000l
- Mixer in pre-hopper
- Automatic filling level display for concrete residue
- Easy to maintain due to permanently installed central lubrication
- Compact closed design
- Suitable for many thixotropic media

## DETAILED PROPERTIES



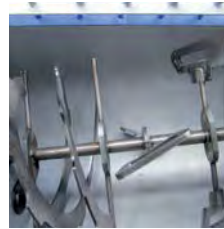
- **Easy to clean**  
Lockable valve in pre-hopper for quick and easy cleaning of the rotor. Includes slewable pipe-bow for easy accessibility and ease of cleaning.



- **Modular pre-hopper**  
If required, the standard pre-hopper with a volume of 600l can be replaced with a 2000l volume pre-hopper.



- **Continuously adjustable feed**  
Low-wear and very accurate filling of the moulds is ensured through the continuously adjustable feed from 0–20 m<sup>3</sup>/h.



- **Integrated mixer**  
The integrated mixer mixes the concrete again before pumping. The resulting venting of self-compacting concrete (SCC) saves time and effort.



- **Radio remote control**  
The compact duplex radio remote control is available for precise operation of the pump from different locations.



- **Automatic residual concrete fill level indicator**  
The level indicator automatically and reliably displays the remaining volume of residual concrete, thus guaranteeing maximum process reliability.



- **Interface for concrete supply**  
The scope of supply includes a permanently programmed interface with attached plug for communication with a mixer and / or a bucket conveyor.



- **Low maintenance**  
The permanently installed central lubrication ensures long-term safe operation and long maintenance intervals.



- **Standardised power input**  
With 33 kW power input and attached CEE three-phase plug, the UPP 100 is perfectly matched to the standard CEE 63 A connection available in every concrete factory.



- **Flexible use of media**  
Due to the overall design, the pump is suitable for almost all thixotropic media.



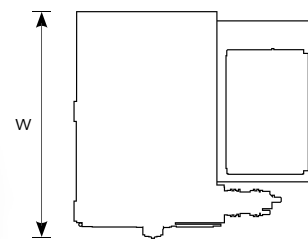
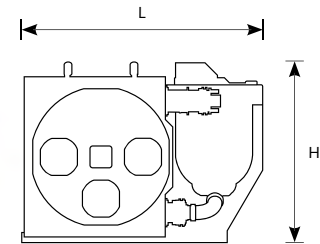
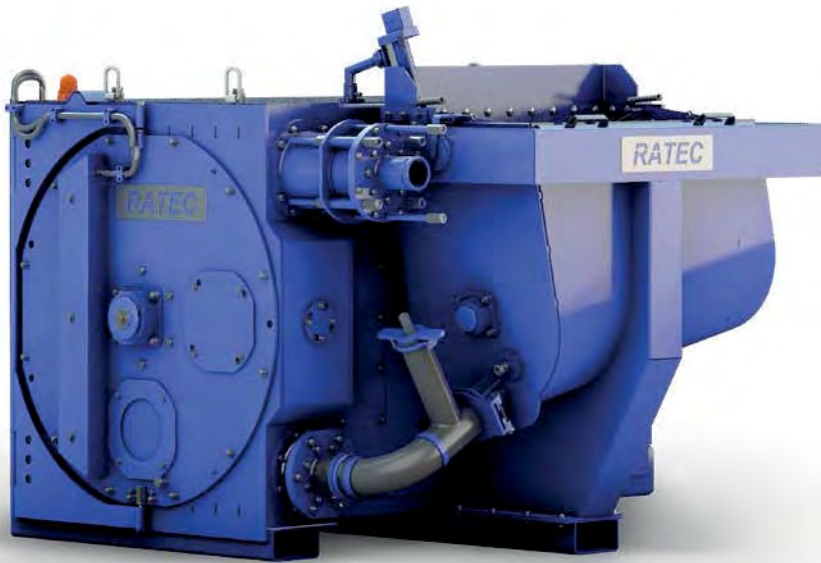
- **Pump car**  
Also available on request as a mobile pumping solution with a larger buffer.

# Products

## ➤ Pump UPP 100



Compact pump station with 100mm conveyor hose diameter for capacity of up to 22 m<sup>3</sup> / h.



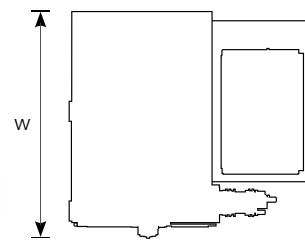
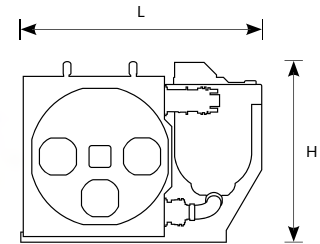
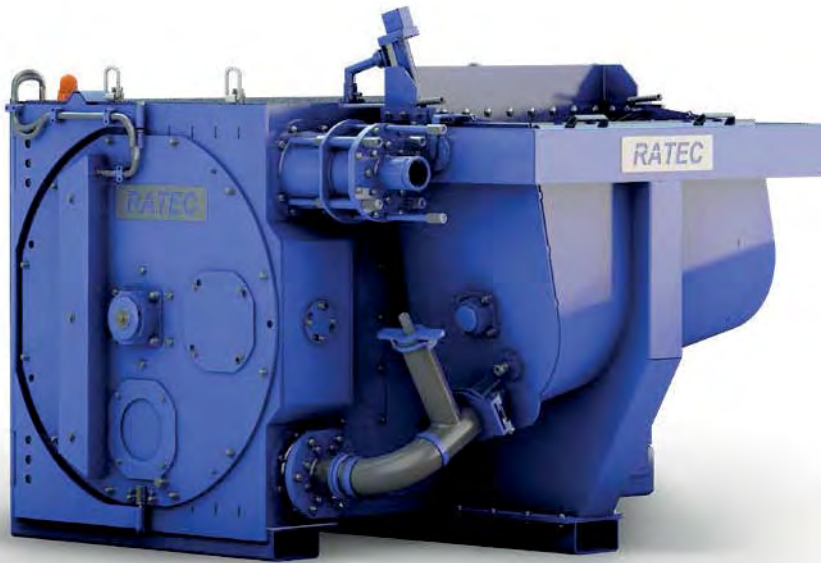
Article no.	UPP 100
Power input	33 kW electrical, device connector CEE 63 A directly at the pump
Compact duplex radio remote control with the following functions:	On/off, speed selector, reverse switch, feedback on graphic display of the remote control
Capacity (max.)	22 m <sup>3</sup> / h
Hopper volume (l)	600
Electric drive	400V / 50Hz
Filling possible over	individual large reservoir (feeding via bucket conveyor or similar), ready-mix concrete truck, crane bucket
Filling height (mm)	1620
Approx. dimensions (L x W x H) in mm	2400 x 2300 x 1800
Approx. weight (kg)	5800
Conveyor hose diameter (mm)	100

Custom-made products are possible: Simply ask us about it.

## ➤ Pump UPP 125



Compact pump station with 125 mm conveyor hose diameter for capacity of up to 33 m<sup>3</sup>/h.



Article no.	UPP 125
Power input	48 kW electrical, device connector CEE 125 A directly at the pump
Compact duplex radio remote control with the following functions:	On/off, speed selector, reverse switch, feedback on graphic display of the remote control
Capacity (max.)	33 m <sup>3</sup> /h
Hopper volume (l)	600
Electric drive	400 V / 50 Hz
Filling possible over	individual large reservoir (feeding via bucket conveyor or similar), ready-mix concrete truck, crane bucket
Filling height (mm)	1595
Approx. dimensions (L x W x H) in mm	2400 x 2300 x 1800
Approx. weight (kg)	5800
Conveyor hose diameter (mm)	125

Custom-made products are possible: Simply ask us about it.

# UCI pump connection

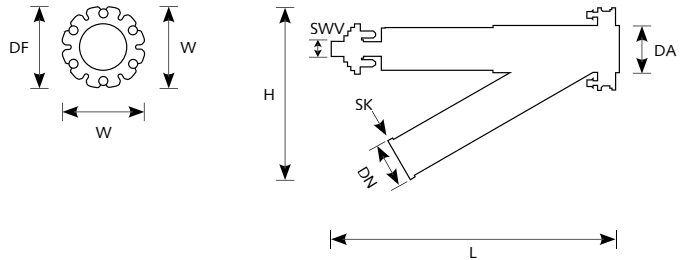
*UCI – advantages at a glance.*

- Enables the supply of concrete with a smooth finish
- No after-treatment necessary
- Clean filling process without concrete residue
- Simple manual or semi-automatic operation
- Easy to use with crank or torque wrench
- No leakage during closing
- Simple flushing process, therefore no extensive maintenance work
- Static end stops prevent incorrect operation
- Can be mounted on steel and plywood shuttering

## ➤ UCI Basic



Our standard for shuttering filling, wear-resistant and clean.



	UCI.70 Basic 3	UCI.100 Basic 3	UCI.125 Basic 3
<b>Article no.</b>	<b>On request</b>	<b>On request</b>	<b>On request</b>
DN Nominal diameter	70	100	125
DA Outlet diameter	90	135	165
DF Flange diameter	190	230	260
SK quick release coupling size	3 ¼"	4 ½"	5 ½"
(SWV) Wrench width lock	SW 36	SW 36	SW 36
L (mm)	764	920	1095
W (mm)	190	235	265
H (mm)	370	482	515
Approx. weight (kg)	27	44	58

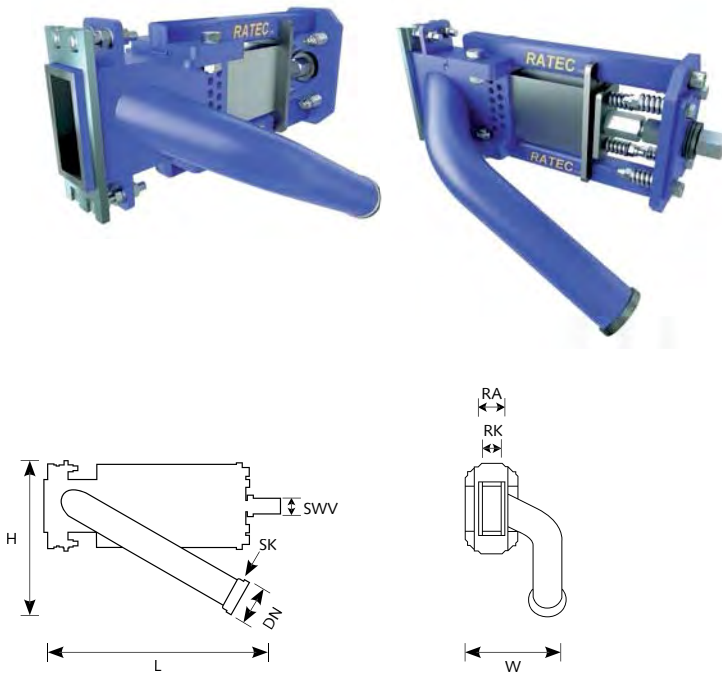


## ➤ UCI Square



Our slim specialist for narrow inlets. With or without flange or completely customised.

### UCI.70 SQUARE

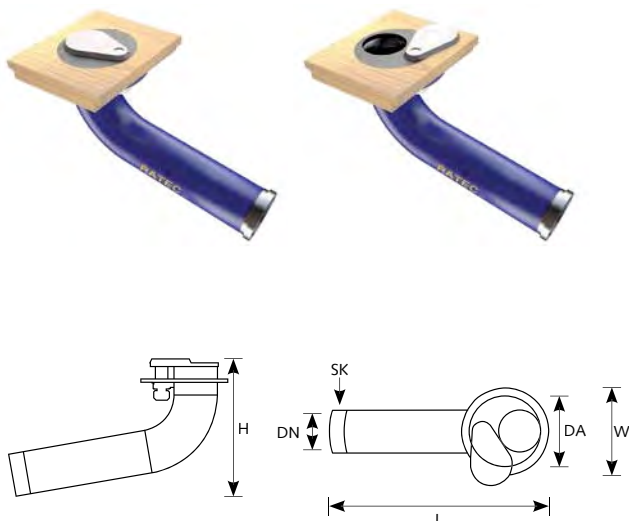


Article no.	On request
DN Nominal diameter	70
RA Rectangular dimension outlet	70x140
RK Rectangular dimension piston	50x120
SK quick release coupling size	SK 3 1/4"
(SWV) Wrench width lock	36
L (mm)	660
W (mm)	250
H (mm)	400
Approx. weight (kg)	26

## ➤ UCI Compact



The compact filling connection for fixing to the bottom shuttering.



Article no.	UCI.70 C	UCI.100 C
	On request	On request
DN Nominal diameter	70	100
DA Outlet diameter	130	180
SK quick release coupling size	3 1/4"	4 1/2"
(SWV) Wrench width lock	30	36
L (mm)	515	582
W (mm)	175	230
H (mm)	300	370
Approx. weight (kg)	7.5	14.5

# KBV crane concrete distributor

*For effective concreting*

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## ADVANTAGES

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- Saves material
- Lowers labour costs
- Makes work easier
- Improves the quality of your concrete precast parts

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## TECHNICAL DETAILS

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- Transport system from the mixing plant to the production area
- Feature for take-off by forklift cradle
- Electrical controlled distribution roller
- Electrical controlled segment closure (optional)
- Vibrator for stuck concrete (optional)
- Discharge width 1200 mm
- Installed power approx. 4 kW
- Protection system IP 55
- Operating voltage 400V (50 Hz)
- Feather cable reel for energy supply from the hall crane
- Length 1700 mm
- Width 2000 mm
- Height 1900 mm
- Empty weight 1780 kg
- Load capacity 2 m<sup>3</sup>



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Other sizes on request. Ask us about it.

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# Application examples



Support elements for Skyrail



Mast elements for wind farm



UPP 100 with support shuttering



UPP with pump truck



Shaft element pumped with UPP



Concrete filling connection UCI Square



Crane-mounted concrete spreader



UPP 100 with pipe casing

# 07

## WORLDWIDE SERVICE

*We are always here for you*

Our philosophy is based on customer proximity and working closely together in all regards. With four own branches in Germany, Spain, the USA and Singapore, we are available where you need us. We also have numerous representatives on site. Our team of precast concrete specialists, engineers and on-site representatives collaborate to find the right solution for you. This is how we have come up with "better ideas" for more than 25 years.



**RATEC WORLDWIDE**

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**RATEC REFERENCE OBJECTS WORLDWIDE**

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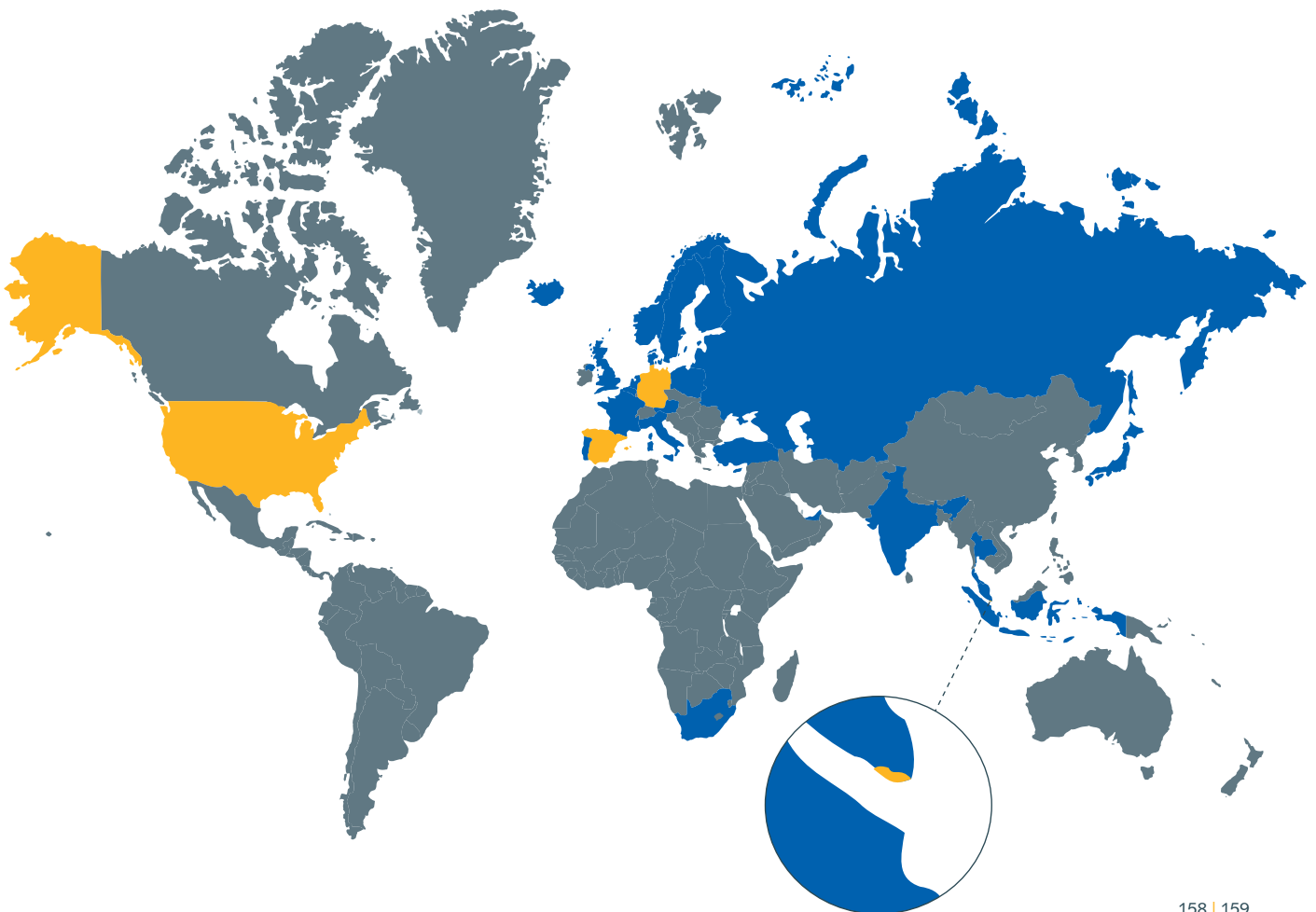
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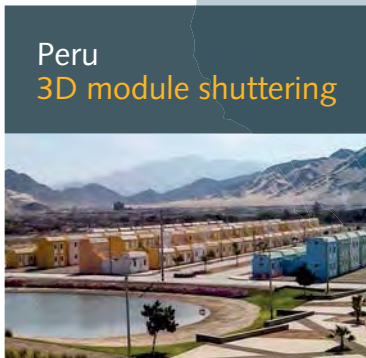
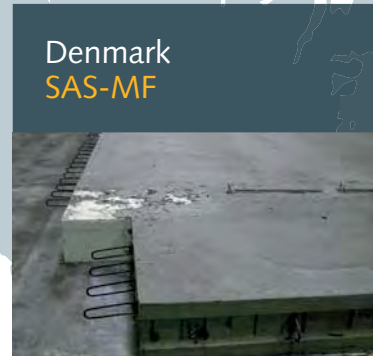
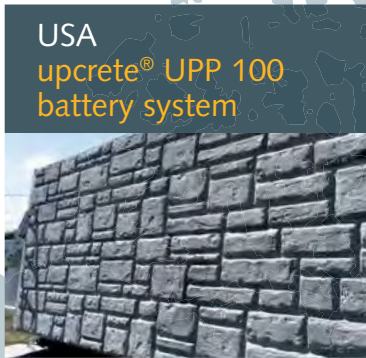
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■ Headquarters ■ Distributors



# Examples of RATEC reference objects Worldwide





Switzerland  
Special shuttering



Russia  
SAS-MF



Thailand  
SAS



Israel  
upcrete® UPP



Philippines  
Battery system



Malaysia  
Easy Form, SAS



Australia  
SAS tower  
special shuttering







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MEET THE BETTER IDEAS

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